August 30, 2013

Ms. Elizabeth Wells, P.E.
Engineering Geologist
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
1515 Clay Street, Suite 1400
Oakland, California 94612

Project No. 33112-012112.00

Subject: *Subsurface Investigation Report*
Moffett-Gateway Property, Former Vector Control Yard
750 Moffett Boulevard and Northern Adjacent Caltrans 3-acre parcel
Mountain View, Santa Clara County, California

Dear Ms. Wells:

Bureau Veritas North America, Inc., on behalf of the City of Mountain View, is pleased to present this *Subsurface Investigation Report* to the San Francisco Regional Water Quality Control Board (Regional Water Board) regarding the above-referenced property. The investigation was conducted pursuant to the *Revised Work Plan for Additional Investigation* dated March 6, 2013.

If you have any questions or comments regarding the information provided herein, please do not hesitate to contact me at 925.426.2629.

Sincerely,

John Werfal
Regional Director
Health, Safety and Environmental Services
San Francisco Regional Office
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Enclosure

cc: Mr. Dennis Drennan, City of Mountain View
Ms. Alana Lee, United Stated Environmental Protection Agency, Region IX

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Site Investigation Report

Moffett-Gateway Property, Former Vector Control Yard
750 Moffett Boulevard and
Northern Adjacent Caltrans 3-acre parcel
Mountain View, Santa Clara County, California

August 30, 2013
Project No. 33112-012112.00
Prepared for
THE CITY OF MOUNTAIN VIEW
Mountain View, California

BUREAU VERITAS

For the benefit of business and people

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1.0 INTRODUCTION

Bureau Veritas North America, Inc. (BVNA) has prepared this *Subsurface Investigation Report* (Report) on behalf of the City of Mountain View (City) regarding the Moffett-Gateway Property comprising the former Santa Clara County Vector Control Yard (VCY) at 750 Moffett Boulevard and northern adjacent, California Department of Transportation 3-acre parcel (Caltrans property), located in Mountain View, Santa Clara County, California (collectively, the "Site," Figures 1 and 2). Additional investigation was conducted in response to the California Regional Water Quality Control Board – San Francisco Bay Area (the Regional Water Board) and U.S. Environmental Protection Agency – Region IX (USEPA) requests for the City to further evaluate the distribution and potential sources of the groundwater plume that underlies the Site and vicinity. The investigation was conducted pursuant to the *Revised Work Plan for Additional Investigation* dated March 6, 2013.

2.0 BACKGROUND

2.1 SITE HISTORY

The VCY property is depicted as undeveloped on topographic maps dated prior to 1939. From 1939 to 1956, the Site was developed with a small residential sized structure and row crops. From 1961 to 1970, the property was vacant with no apparent structures. The VCY was initially constructed by the County of Santa Clara in 1970. The VCY property was used for storage and handling of flammable materials and pest control products from 1970 to 2003 and has been vacant since 2004. Trichloroethene (TCE) was reportedly used in small quantities for cleaning and may have been a component of stored pesticides. The Caltrans property was in agricultural use from at least 1939 until approximately 1961, and was then developed with a section of cloverleaf highway ramp and a road connecting Highway 101 and Moffett Boulevard. This use continued through the early 2000s, when the cloverleaf and connecting road were removed by Caltrans during realignment; since that time property use has been limited to mulch storage.

The VCY property formerly had three underground storage tanks (USTs) installed in 1970, which stored weed oil, mosquito larvicide ("flit," diesel fuel), and gasoline. The USTs were removed in March 1994 and received regulatory closure by the County of Santa Clara Environmental Resources Agency Office of Toxics Enforcement in a document, dated May 24, 1994. County VCY operations were relocated in June 2004. The County approved a Closure Application for aboveground hazardous materials storage, dated June 21, 2004. The facility closure inspection noted that hazardous materials had been removed from the Site and hazardous materials permits for the Site were deactivated.

Due diligence activities at the VCY in 2004 and 2005 by URS identified petroleum hydrocarbons and pesticides in soil in an unvegetated area and the former UST area. URS attributed detections of volatile organic compounds (VOCs) in groundwater to off-site sources (URS, 2007). Due diligence activities conducted by Clayton Group Services (Clayton) in 2005 identified VOC impacts including TCE to soil gas and shallow groundwater at concentrations exceeding regulatory screening levels.

In 2006, soil impacts were addressed by excavation and removal from three limited areas. In July 2006, the County enrolled the VCY into a Voluntary Cleanup Agreement (VCA) with the California Department of Toxic Substances Control (DTSC) to address soils impacted with pesticides associated with the former use of an underground catch basin (later removed). DTSC concluded that the catch basin, which served to settle out sediments from vehicle wash water, was the most likely cause of contamination in soil at that location. DTSC requested that the County evaluate the historical storage and use of insecticides and fungicides at the Site and perform additional testing of fill piles and clearings for organochlorine pesticides (OCPs), metals, and specified insecticides and fungicides. DTSC also requested that the County investigate groundwater gradient, flow direction and quality in the shallow (A1) and deeper (A2/B1) groundwater bearing zones and assess the utility corridor that passes under the Site to determine if it may be a conduit for contaminant migration.

In December 2007, URS submitted its *Supplemental Environmental Investigation Report,* which concluded that the extent of total petroleum hydrocarbons (TPH), OCPs and fuel-related VOC impacts identified in soil surrounding the catch basin was limited and had been delineated. Low concentrations of TCE detected in some soil samples collected from the saturated zone or capillary fringe in the catch basin/floor drain and utility corridor areas were attributed to groundwater contaminants. TCE detected in groundwater was attributed in part to migration from offsite via the utility corridor (URS, 2007). The DTSC indicated at that time that remediation of groundwater contamination was not required.

A Removal Action Workplan (RAW) was developed to remove the catch basin features and address associated residual TPH and fuel-related VOC contamination in soil to achieve conditions considered amenable to redevelopment. Details are presented in URS' *Removal Action Completion* Report, dated April 17, 2009. In a letter dated May 6, 2009, the DTSC issued environmental closure with no further action required. The City acquired the VCY property in September 2009 and is negotiating to acquire the Caltrans property. The City is considering redevelopment of the Site for commercial use. The specific redevelopment plans are not known at this time, but will likely include construction of a commercial building in the northern portion of the Site and expansive surface parking.

Subsurface investigations and remedial actions for the Site and the cross-gradient properties at 850 and 870 Leong Drive are described in the reports cited in the reference section of this report. Soil, soil vapor and/or groundwater sampling locations associated with these investigations are included in Figure 2.

2.2 GEOLOGY

The Site is located in the Santa Clara Valley, a large structural basin in the Central Coast Ranges of California, bound by the Diablo Range to the east and the Santa Cruz and Gabilan Mountains to the west. Streams emerging from the base of the adjoining mountains form gently sloping alluvial fans that merge basinward into coalescing fans, which extend towards the central portions of the basin. Approximately 1½ miles north of the Site, the distal margins of the fan system extending eastward from the Santa Cruz Mountains merge with the marshlands adjoining the southern end of San Francisco Bay. The basin is filled with marine and alluvial sediments of Holocene Age. These deposits are underlain by several

thousand feet of Pleistocene Age alluvial deposits, which are in turn underlain by Franciscan Complex bedrock of Cretaceous-Jurassic Age.

Environmental investigations conducted at the Site to date have identified native sediments beneath the Site to a maximum depth of approximately 65 feet below ground surface (bgs). The sediments consist predominantly of alluvial deposits including medium- to coarse-grained, gravelly sand, clay (silty clay to sandy clay) and silt (clayey silt to sandy silt). The coarse-grained channel deposits are lenticular in shape, of varying thickness and interbedded with fine-grained overbank and flood plain deposits.

2.3 HYDROGEOLOGY

Three principal water bearing units in the Site vicinity are reportedly separated by silt and clay low permeability layers or aquitards. The uppermost aquifer unit is known as the "A" aquifer and extends from the top of the saturated zone to a depth of approximately 65 feet bgs. A discontinuous aquitard within the A aquifer subdivides it into two zones: A1 extends from the top of the saturated zone at an approximate depth of 8 to 12 feet bgs, to a depth of approximately 45 feet bgs; A2/B1 extends from approximately 45 to 65 feet bgs. The discontinuous nature of the aquitard results variously in hydraulic isolation or communication between the A1 and A2/B1 zones across the Site. Local groundwater flow direction in the A1 and A2/B1 aquifers is reportedly to the north-northwest, towards San Francisco Bay. The "B" aquifer extends from a depth of approximately 70 to 160 feet bgs and is separated from the A aquifer by a laterally continuous clay aquitard. The "C" aquifer is a confined aquifer present at depths of approximately 180 to 250 feet bgs and is separated from the B aquifer by an approximate 20 to 40 foot thick clay aquitard. A strong vertically upward gradient exists between the C and B aquifers. Local groundwater flow in both the B and C aquifers is reportedly to the north-northwest, similar to the A aquifer.

3.0 SCOPE OF WORK

Site investigation activities included the following scope of work:

- Investigation of the utility corridor that transects the Site
- Collection and analysis of soil vapor samples
- Advancement of cone penetration test (CPT) borings
- Advancement of membrane interface probe (MIP) borings
- Collection and analysis of soil and grab-groundwater samples

3.1 PRE-FIELD ACTIVITIES

Prior to beginning work, drilling permits were obtained from the Santa Clara Valley Water District (SCVWD) as required for borings advanced to depths equal to or exceeding 45 feet bgs (Appendix A).

A site health and safety plan (HASP) was prepared for the work in accordance with requirements of the State of California General Industry Safety Order (GISO) 5192 and Title 29 of the Code of Federal Regulations, Section 1910.120 (29 CFR 1910.120). A copy of the HASP was kept onsite during field activities and detailed the work to be performed, safety precautions, emergency response procedures, nearest hospital information, and onsite personnel responsible for managing emergency situations.

The drilling and exploratory trenching locations were marked with white paint and Underground Service Alert (USA) was notified of the work at least 48 hours prior to the commencement of field activities to mark underground utilities in the designated work areas as part of the clearance process. In addition, a private utility locating contractor was retained to clear proposed trenching and drilling locations of underground utilities.

3.2 UTILITY CORRIDOR INVESTIGATION

Additional investigation of the utility corridor, containing two storm drain lines (81" and 18" diameter) and one sanitary sewer line (15" diameter), was completed to assess potential releases of VOCs from the utility lines and contaminant migration both within the utility lines as well as in the fill materials surrounding these features. As-built drawings for the storm drain and sanitary sewer lines that comprise the utility corridor were obtained from the City of Mountain View. Video surveys of the storm drain and sanitary sewer lines beneath the Site that were performed for the City of Mountain View in 2012 were also reviewed.

On May 2 and May 3, 2013, two exploratory trenches were excavated perpendicular to the utility corridor to expose the storm drain and sanitary sewer lines to evaluate the fill materials surrounding the buried piping and to facilitate the collection of groundwater samples within the fill materials. One trench was completed in the eastern portion of the Site and a second trench was excavated in the unvegetated area (Figure 2). The trenches were excavated to maximum depth of 12 to 14 feet bgs. The excavated soil was temporarily stockpiled on plastic sheeting adjacent to the trenches. Prior to backfilling the trenches, a 3-inch diameter PVC casing approximately 11 to 13 feet in length was placed adjacent to the midsection of the 81-inch diameter storm drain line and the 15-inch diameter sanitary sewer line to serve as a conductor casing for advancing direct-push borings to collect grab-groundwater samples.

The trenches were backfilled in accordance with City of Mountain View Department of Public Works specifications. A 12-inch layer of sand backfill material was placed on top of the VCP sanitary sewer lines. The excavated soil was subsequently placed into the trench in lifts above the sand backfill material and compacted.

3.3 SOIL VAPOR SAMPLING

Between March 28 and July 2, 2013, soil vapor samples were collected from the twelve locations (SV-1 through SV-12) shown on Figure 3.

Borings were advanced to depths of approximately 5 to 10 feet bgs by a California C-57 licensed drilling contractor using truck-mounted, direct-push drilling equipment (Geoprobe®). Upon completion of the soil

vapor borings to the targeted depths, approximately six inches of clean, graded, sand filter pack was placed at the bottom of each borehole followed by inert (i.e., Nylaflow) tubing containing a vapor inlet filter. After the tubing was set in place, an additional 6 inches of clean sand was added above the tip of the tubing. The borehole annulus was filled with approximately one foot of dry granular bentonite and then filled with hydrated bentonite chips to grade. The temporary soil vapor wells were allowed to equilibrate for a minimum of two hours prior to sample collection.

Prior to sampling, a vacuum test was performed to confirm that the sampling vapor manifolds were secure and that there were no obvious or significant leaks. Based on prior soil vapor sampling conducted at the Site, a default of three purge volumes was extracted from each location to remove ambient air. During purging and sampling, a tracer compound (isopropanol) was used to monitor the vapor probes and sample train for leaks.

After purging, soil vapor samples were collected at a flow rate of approximately 150 milliliters per minute using one-liter SUMMA canisters provided by the certified analytical laboratory. The vacuum gauge was recorded prior to the start of sampling and at the end of sampling to confirm sample collection. Upon collection, the soil vapor samples were recorded on a chain-of-custody document that accompanied the vapor samples from the point of collection to the analytical laboratory. A total of 15 soil vapor samples and one duplicate sample were collected.

The soil vapor samples were collected in general conformance with guidance provided in the April 2012 *Advisory Active Soil Gas Investigations* developed jointly by DTSC, San Francisco Water Board, and Los Angeles Water Board.

3.4 CPT AND MIP BORINGS

Seventeen CPT borings were advanced between April 30 and May 3, 2013 at the locations shown on Figure 2. The CPT borings were advanced to depths of approximately 70 feet bgs to 83 feet bgs. The following parameters were measured for each CPT boring:

- Tip Resistance (q_t)
- Sleeve Friction (f_s)
- Dynamic Pore Pressure (u_t)

Two of the CPT borings included use of a membrane interface probe (MIP). CPT plots that presented interpreted Soil Behavior Type (SBT) based on relationships among these parameters (Robertson et al, 1986) were provided by Gregg Drilling. Between SBT values of 2 and 10, increasing SBT values generally represent a transition from fine grain soils to coarse grain soils. CPT logs are included in Appendix B.

Ten additional MIP borings were advanced between May 3 and May 7, 2013 utilizing a direct-push rig that was also equipped with a soil conductivity probe (SCP) at the locations shown on Figure 2. These included two MIP borings (BV-M26 and BV-M27) adjacent to the utility corridor near the former VCY office building that were additional to the borings proposed in the Work Plan. These two borings were added in response to ECD and XSD recordings in the vadose zone and shallow groundwater at BV-M21.The MIP

provides real-time detection of VOCs or non-aqueous phase liquids (NAPL) in the vadose and saturated zones. The MIP has a semi-permeable membrane placed in a heating block that volatilizes VOCs from soil or groundwater near the MIP. The volatilized VOCs pass through the membrane and are transported by an inert carrier gas through tubing to gas phase detectors at the surface. The gas phase detectors included an electron capture detector (ECD), halogen-specific detector (XSD), photoionization detector (PID), and flame ionization detector (FID). Each detector has different sensitivities to various chemical compounds. The ECD and XSD are most sensitive to chlorinated VOCs; the PID to aromatic VOCs; and the FID to aliphatic hydrocarbons such as methane. The SCP measures the electrical conductivity (EC) of the soil matrix. Clayey soils with high particle-to-particle contact and high moisture holding capacity are more electrically conductive than sandy and gravelly soils with limited particle-to-particle contact.

The 10 direct push MIP borings were advanced to depths of approximately 35 feet bgs to 71 feet bgs. Soil conductivity measurements were graphed versus depth. The relative concentrations of VOCs were graphed versus depth and are presented on the MIP logs included in Appendix C.

Following the advancement of the CPT and MIP borings, the boreholes were grouted to the surface using a tremie pipe in accordance with SCVWD requirements.

3.5 SOIL AND GRAB-GROUNDWATER SAMPLING

The CPT and MIP logs were used to select soil and grab-groundwater sampling locations and depth intervals. A preliminary data package presenting the CPT and MIP/SCP profiles and the proposed soil and groundwater sampling locations and depth intervals was transmitted to the Regional Water Board and EPA for review and concurrence prior to sampling.

Two soil samples and 63 grab-groundwater samples were collected between June 18, 2013 and July 3, 2013.

A direct-push boring was advanced to adjacent to MIP boring BV-M21 and CPT boring BV-C9 for the collection of soil samples where low-level ECD and XSD recordings were observed in the vadose zone. Soil cores were collected from the borings for soil logging purposes using a 4-foot long core barrel sampler that contained an acetate liner to retain a relatively undisturbed soil core. Soil cores were examined for soil classification and described on boring logs in general conformance with the Unified Soil Classification System. Soil boring field logs are presented in Appendix D.

Field screening of soil cores was performed using a photoionization detector (PID) to evaluate the potential presence of VOCs and assist in the selection of soil samples for chemical analysis. To initiate this procedure, soil samples were removed from plastic liners, placed into labeled plastic bags and sealed. After sufficient time had elapsed for vapor build-up inside the bags, the bags were punctured and the probe tip of the PID was inserted to allow measurement of ionizable substances in the headspace. Measurements of the headspace were obtained in the parts per million (ppm) range for total VOCs. The results of the headspace tests were recorded on the boring log.

Soil samples were collected at approximately 6 feet and 10 feet bgs for chemical analysis. The soil subcores were obtained from the acetate liner and placed in laboratory supplied VOAs preserved with

reagent-grade water or methanol. The soil samples were sealed, labeled and placed in a pre-chilled ice chest for delivery to the laboratory. Chain-of-custody records were completed and accompanied the soil sample shipments to the laboratory.

Grab-groundwater samples were collected from borings adjacent to each CPT location. Direct-push rods equipped with a Hydropunch® sampler were advanced to the targeted sampling depth interval. When the bottom of the sampling depth interval was reached, the rods were retracted approximately 2 to 4 feet, exposing the stainless steel screen. The grab-groundwater samples were collected through disposable Teflon® tubing and decanted into laboratory-supplied sample containers. The groundwater samples were sealed, labeled and placed in a pre-chilled ice chest for delivery to the laboratory. A trip blank was included in each cooler and analyzed for VOCs. Chain-of-custody records were completed and accompanied the grab-groundwater sample shipments to the laboratory.

Grab-groundwater samples were also collected from borings adjacent to the 81-inch diameter storm drain line and the 15-inch diameter sanitary sewer line where the two exploratory trenches had been excavated. Direct-push rods equipped with a Hydropunch® sampler were advanced through the 3-inch diameter conductor casings that had been placed adjacent to the storm drain and sanitary sewer lines to the approximate depth of the adjacent utility line: 15 feet bgs for the sanitary sewer line and 18 feet bgs for the storm drain line. When the bottom of the sampling depth interval was reached, the rods were retracted approximately 2 to 4 feet, exposing the stainless steel screen. The grab-groundwater samples were collected through disposable Teflon® tubing and decanted into laboratory-supplied sample containers. The groundwater samples were sealed, labeled and placed in a pre-chilled ice chest for delivery to the laboratory. A trip blank was included in each cooler and analyzed for VOCs. Chain-of-custody records were completed and accompanied the grab-groundwater sample shipments to the laboratory.

Due to insufficient water recovery at location BV-SS2, a temporary well casing was installed in the open boring. The casing was 0.75-inch diameter PVC casing that was slotted along the bottom 5-foot length. A grab-groundwater sample was subsequently obtained using a peristaltic pump equipped with new Teflon® tubing.

The rods and Hydropunch® sampler were steam-cleaned or washed in a solution of non-phosphate detergent and double-rinsed with tap water before being driven to the next sample depth interval in the borings and between borings.

Following the advancement of the direct-push borings, the boreholes were grouted to the surface using a tremie pipe in accordance with SCVWD requirements.

3.6 LABORATORY ANALYSES

Soil vapor, soil, and groundwater samples were submitted to State of California certified laboratories for analysis of VOCs using the following United States Environmental Protection Agency (USEPA) methods:

- Soil Vapor Samples: Method TO-15

- Soil Samples: Method 8260B with sample preservation by Method 5035
- Groundwater Samples: Method 8260B

3.7 SURVEYING

A State of California Licensed Land Surveyor surveyed the location and elevation of each of the soil vapor, CPT and MIP boring locations. The survey data is presented in Appendix E.

3.8 WASTE HANDLING

Investigation-derived wastes (i.e., soil cuttings, decontamination water, well development water, and purge water) generated during this investigation were containerized in Department of Transportation (DOT) approved 55-gallon drums. The wastes were sealed and labeled with the appropriate generator information and temporarily stored onsite for future disposal, pending receipt of analytical results.

4.0 INVESTIGATION FINDINGS

BVNA evaluated the data generated during this investigation. Our findings are summarized in the subsections below.

4.1 UTILITY CORRIDOR

The utility corridor transecting the Site consists of two storm drain lines (81" and 18" diameter) and one sanitary sewer line (15" diameter). Based on drawings obtained from the City of Mountain View, the 18" diameter storm drain and 15" sanitary sewer were constructed prior to 1953. The 81" storm drain was constructed between 1953 and 1959. Flows through the storm drain and sanitary sewer lines are from east to west.

From the outfall at Stevens Creek, the 18" storm drain extends east across the Site and terminates at Emily Drive. From the outfall at Stevens Creek, the 81" storm drain runs in a south-southeast direction towards the west side of the former VCY office building and then turns east to Leong Drive, then northeast beneath Leong Drive before turning east beneath Evandale Avenue. West of the intersection of Evandale Avenue and Tyrella Avenue, the 81" storm drain reduces to a 78" line. At the intersection of Evandale Avenue and Tyrella Avenue, the storm drain connects with a 72" storm drain that runs north on Tyrella Avenue before turning east on Fairchild Drive. After crossing Stevens Creek, the 15" sanitary sewer runs southeast towards the west side of the former VCY office building, east across the Site to Leong Drive, then northeast beneath Leong Drive before turning east beneath Evandale Avenue to Whisman Road.

Review of the video surveys of the 81" storm drain and 15" sanitary sewer identified a break in the sanitary sewer line approximately 300 feet west of Moffett Boulevard (near boring BV-C8). The break consisted of a small fracture in the bottom portion of line. It was believed that the break had occurred within the past 10 years since the last video surveys were completed. No appreciable groundwater

appeared to be entering the sanitary sewer. In contrast, a review of the video survey of the 81" storm drain line identified several sections of the line where appreciable volumes of groundwater could be seen seeping into the storm drain.

Two exploratory trenches were excavated perpendicular to the utility corridor to expose the storm drain and sanitary sewer lines. In the east trench, the tops of the 81" storm drain, 18" storm drain, and 15" sanitary sewer were encountered at approximate depths of 8.5 feet, 3.5 feet, and 10.5 feet bgs, respectively. Native materials encountered during trenching were fine-grained silt-clay to clay. Engineered fill materials (i.e., sand) were not observed surrounding the two storm drain lines. Sand bedding was observed surrounding the sanitary sewer line. When the sand bedding was exposed, significant groundwater flowed into the exploratory trench from the east through the sand fill materials. .

In the west trench, the top of the 81" storm drain, 18" storm drain, and 15" sanitary sewer were encountered at approximate depths of 11 feet, 13 feet, and 6 feet bgs, respectively. Native materials encountered during trenching were fine-grained silt-clay to clay. Engineered fill materials (i.e., sand) were not observed surrounding the two storm drain or sanitary sewer lines. Saturated conditions were not observed in the trench to a depth of approximately 13.5 feet, except that the following morning approximately 6 to 8 inches of groundwater were observed to have accumulated in the bottom of the trench.

4.2 SOIL VAPOR SAMPLING RESULTS

Analytical results of the soil vapor samples are summarized in Table 1. A copy of the laboratory report and chain-of-custody documentation is included in Appendix F. Soil vapor analytical results were compared to Regional Water Board Environmental Screening Levels (ESLs). The following is a summary of the analytical findings:

- TCE was detected in two soil vapor samples collected from SV-5 at 5 feet bgs (2,200 µg/m^3) and SV-9 at 5 feet bgs (810 µg/m^3) at concentrations exceeding the ESL for residential land use of 300 µg/m^3. TCE was not detected at concentrations exceeding the ESL for commercial/industrial land use (3,000 µg/m^3). The laboratory reporting limit for SV-4 at 5 feet bgs (7,400 µg/m^3) was above the ESL.
- Low-level concentrations of VOCs including acetone, 2-butanone, isopropanol, benzene, trans-1,,2-dichloroethene (DCE), cis-1,2-DCE, trichlorofluoromethane, Freon 113, n-hexane, n-heptane, cyclohexane, tetrachloroethene (PCE), ethylbenzene, xylenes, and chloroform were detected in one or more of the analyzed soil vapor samples. The detected concentrations are below applicable residential and commercial ESLs.

Soil vapor sample locations and TCE concentrations are presented on Figure 3.

4.3 CPT AND MIP BORING OBSERVATIONS

CPT borings were advanced to further characterize subsurface lithology. The CPT borings were generally advanced to depths of approximately 70 feet bgs to evaluate the A1 and A2/B1 aquifer zones.

The CPT logs depict alluvial deposits including medium- to coarse-grained, gravelly sand, clay (silty clay to sandy clay) and silt (clayey silt to sandy silt). The coarse-grained channel deposits are lenticular in shape, of varying thickness and interbedded with fine-grained overbank and flood plain deposits. Low-permeability material, primarily silts and clays, were generally encountered from ground surface to approximately 16 to 20 feet bgs at most boring locations. As depicted on the cross section presented on Figures 7 through 9, a coarse-grained zone of approximately 1 to 10 feet in thickness was encountered below this fine-grained layer across much of the Site. A complex hydrostatigraphic layering of multiple permeable lenses separated by lower permeable layers was encountered beneath this upper water-bearing zone.

The MIP logs, presented in Appendix C, depict elevated ECD and XSD responses at a depth of approximately 20 feet bgs for borings BV-CM3, BV-CM4, BV-M21, BV-M22, BV-M24, and BV-M26. Elevated ECD and XSD responses are also recorded in BV-CM3 between 35 and 40 feet bgs, and BV-CM4 at depths of 35 to 40 feet bgs, 65 to 70 feet bgs, and 73 to 76 feet bgs. The elevated ECD and XSD responses generally correlated with coarse-grained zones as identified by electrical conductivity readings or nearby CPT borings.

4.4 SOIL SAMPLING RESULTS

Analytical results of the soil samples are summarized in Table 2. A copy of the laboratory report and chain-of-custody documentation is included in Appendix F.

- Low-level concentrations of VOCs, including acetone, cis-1,2-DCE, trans-1,2-DCE, TCE, or xylenes were detected in one or more of the analyzed soil samples. The detected concentrations are below applicable residential and commercial ESLs.

4.5 GRAB-GROUNDWATER SAMPLING RESULTS

Analytical results of the grab-groundwater samples are summarized in Table 3. A copy of the laboratory report and chain-of-custody documentation is included in Appendix F.

Due to the multiple water-bearing zones encountered in the A1 zone, the A1 zone groundwater data has been categorized and presented as a shallow A1 zone defined as 0 to 25 feet and a deeper A1 zone, defined as 25 to 45 feet bgs. The grab-groundwater analytical results were compared to ESLs. The following is a summary of the analytical findings:

Shallow A1 Zone

- TCE was detected above the ESL of 5 µg/L in 15 of 23 samples at concentrations between 5.1 micrograms per liter (µg/L) and 440 µg/L.
- Cis-1,2-dichloroethene (DCE) was detected above the ESL of 6 µg/L in 15 of 23 samples at concentrations between 8.0 µg/L and 2,000 µg/L.
- Trans-1,2-DCE was detected above the ESL of 10 µg/L in 4 of 23 samples at concentrations between 94 µg/L and 300 µg/L.

- 1,1-DCE was not detected above the ESL of 6 µg/L.
- Vinyl chloride (VC) was detected above the ESL of 0.5 µg/L in 8 of 23 samples at concentrations between 0.51 µg/L and 58 µg/L
- Low-level concentrations of benzene, toluene, and xylenes the analyzed groundwater samples, with benzene exceeding the ESL at a concentration of 1.2 µg/L.

Deeper A1 Zone

- TCE was detected above the ESL of 5 µg/L in 10 of 19 samples at concentrations between 5.7 µg/L and 16,000 µg/L.
- Cis-1,2-DCE was detected above the ESL of 6 µg/L in 10 of 19 samples at concentrations between 72 µg/L and 6,700 µg/L.
- Trans-1,2-DCE was detected above the ESL of 10 µg/L in 10 of 19 samples at concentrations between 19 µg/L and 920 µg/L.
- 1,1-DCE was detected above the ESL of 6 µg/L in 6 of 19 samples at concentrations between 31 µg/L and 490 µg/L.
- VC was detected above the ESL of 0.5 µg/L in 9 of 19 samples at concentrations between 1.7 µg/L and 260 µg/L
- Low-level concentrations of benzene, toluene, and xylenes were detected the analyzed groundwater samples, with benzene exceeding the ESL in one sample at a concentration of 2.1 µg/L.

A2/B1 Zone

- TCE was detected above the ESL of 5 µg/L in 11 of 19 samples at concentrations between 5.2 µg/L and 130 µg/L.
- Cis-1,2-DCE was detected above the ESL of 6 µg/L in 4 of 19 samples at concentrations between 7.8 µg/L and 64 µg/L.
- Trans-1,2-DCE was detected above the ESL of 10 µg/L in 3 of 19 samples at concentrations between 10 µg/L and 23 µg/L.
- 1,1-DCE was not detected above the ESL of 6 µg/L.
- VC was detected above the ESL of 0.5 µg/L in 2 of 19 samples at concentrations of 3.1 µg/L and 3.2 µg/L.
- Low-level concentrations of benzene, toluene, and xylenes were detected in the analyzed groundwater samples, with benzene exceeding the ESL in one sample at a concentration of 1.0 µg/L.

B2 Zone

- TCE was detected above the ESL of 5 µg/L in a sample collected from BV-CM4 at a concentration of 310 µg/L.

- Cis-1,2-DCE was detected above the ESL of 6 µg/L in a sample collected from BV-CM4 at a concentration of 9.5 µg/L.
- Trans-1,2-DCE was not detected above the ESL of 10 µg/L.
- 1,1-DCE was not detected above the ESL of 6 µg/L.
- VC was not detected above the ESL of 0.5 µg/L.
- Low-level concentrations of benzene and toluene were detected the analyzed groundwater samples at concentrations below the ESLs.

Figures 4 through 6 present TCE isoconcentration contours. TCE concentrations in the grab-groundwater samples are also presented on the cross sections shown on Figures 7 through 9.

5.0 DISCUSSION

This section presents a summary discussion of the sampling results and potential VOC sources and migration pathways.

SAMPLING RESULTS

TCE concentrations in soil vapor are presented on Figure 3. Soil vapor samples were primarily collected at depths of 5 feet bgs to provide source screening information. Two areas of higher TCE concentrations were identified adjacent to the utility corridor as shown on Figure 3. Three soil vapor samples were collected at a depth of 10 feet bgs. VOC concentrations in soil vapor samples collected during this and previous investigations did not exceed ESLs for commercial/industrial land use, with the possible exception of SV 4, which had a laboratory reporting limit above the ESL. Recent and historical soil vapor sample results appear to indicate that vapor intrusion risks, particularly in the northern portion of the Site, may not be significant.

The TCE isoconcentration contours presented on Figures 4 through 6 were developed using the grab-groundwater sampling data obtained during this investigation along with groundwater sampling data from previous investigations at and near the Site. Based on the CPT logs, the recent shallow A1 zone groundwater samples were generally collected at depths of 18 to 20 feet bgs.

As summarized below, the results of the grab-groundwater samples from the shallow A1 zone during this investigation appear to correlate well with proximal grab-groundwater samples previously collected at similar depths from the shallow A1 zone.

July 2013 TCE Results		Previous TCE Results	
BV-C9	440 µg/L	UL-B-2	413 µg/L
BV-C10	<0.5 µg/L	UL-C-3	ND
BV-C12	1.8 µg/L	DG-1	2.03 µg/L

Based on this correlation and the coarse-grained lithologic unit identified in CPT borings across most of the Site, the previously collected shallow grab-groundwater samples appear to have been representative of the shallow A1 zone.

The results of the grab-groundwater sampling indicate distinct TCE plumes located in the western portion of the Site near the former VCY office building and on the eastern portion of the Site. As shown on Figure 4, TCE concentrations in the shallow A1 zone appear to show multiple potential release areas proximal to the utility corridor.

In the western portion of the Site near the former VCY office building, groundwater sampling data suggest potential release areas near HP-01 to the west of the former VCY office building, and near BV-C9 and UL-B-2 east of the former VCY office building. As shown on Figure 3, elevated TCE concentrations were also detected in shallow soil vapor near BV-C9 and UL-B-2. TCE was also detected in shallow soil samples collected from BV-C9 at concentrations below the ESL.

The lateral extent of TCE exceeding 5 µg/L in the shallow A1 zone in the western portion of the Site appears to be defined by samples collected from BV-C10, to the south; SB-19 to the west, BV-C12 and HP-02 to the north; SB-24 and BV-C17 to the northeast; and BV-C8 and HP-17 to the east (Figure 4).

As shown on Figures 5 and 6, the vertical extent of TCE in the western portion of the Site appears generally confined to the shallow A1 zone. In the deeper A1 zone, TCE was detected in a sample collected from BV-C9 at a concentration of 7.8 µg/L. The lateral extent exceeding 5 µg/L in the deeper A1 zone in the western portion of the Site appears to be confined to a small area near BV-C9 as defined by samples collected from BV-C8, BV-C10, BV-C11, BV-C12, HP-02, HP-17, and HP33A.

In the A2/B1 zone, TCE was detected in a sample collected from BV-C9 at a concentration of 6.1 µg/L. The extent of TCE exceeding 5 µg/L in the deeper A2/B1 zone in the western portion of the Site appears to be confined to a small area near BV-C9 as defined by samples collected from BV-C8, BV-C10, BV-C11, BV-C12, HP-02, HP-17, and HP33A.

In the eastern portion of the Site, groundwater sampling data suggest potential release areas near HP-32 and HP-16 in the central area of the Site, and near BV-CM4 by the eastern boundary of the Site.

The extent of TCE exceeding 5 µg/L in the shallow A1 zone in the central portion of the Site appears to be defined by samples collected from BV-C15 and HP33 to the south; BV-C16, BV-C17, and HP-33A to the north, and BV-C8 and HP-17 to the west. TCE was detected in groundwater samples collected adjacent to the storm drain (BV-SD2) and sanitary sewer (BV-SS2) at concentrations of 14 µg/L and 10 µg/L, respectively.

The extent of TCE exceeding 5 µg/L in the shallow A1 zone by the eastern boundary of the Site appears to be defined by samples collected from BV-C14 to the south; SB-26 and HP-33 to the west; and BV-C15 to the southwest. TCE was detected in groundwater samples collected adjacent to the storm drain (BV-SD1) and sanitary sewer (BV-SS1) at concentrations of 56 µg/L and 18 µg/L, respectively.

As shown on Figure 5, the highest concentrations of TCE were detected in grab-groundwater samples collected from the deeper A1 zone in the eastern portion of the Site proximal to the utility corridor near BV-CM3, BV-CM4 and BV-C5. TCE concentrations detected in grab-groundwater samples collected from these borings ranged from 550 µg/L in BV-CM4, to 16,000 µg/L in BV-CM3. The results from grab-groundwater sampling appear to show a potential release area(s) proximal to the utility corridor near BV-

CM3 and BV-CM4 in the eastern portion of the Site. A sanitary sewer manhole is located between BV-CM3 and BV-CM4. As shown on Figure 3, elevated TCE concentrations were also detected in shallow soil vapor near BV-CM3, BV-CM4 and BV-C5.

The lateral extent of TCE exceeding 5 µg/L in the deeper A1 zone appears to be defined to the south by samples collected from BV-C13 and BV-C15, and to the west by samples collected from HP-17, BV-C8, and HP33A.

The A2/B1 groundwater samples were generally collected at depths between 45 to 65 feet bgs. TCE concentrations grab-groundwater samples collected in the A2/B1 near the utility corridor were significantly lower than were TCE concentrations in the deeper A1 zone. . The highest concentrations of TCE in groundwater samples collected from the A2/B1 zone during this investigation were detected in borings BV-CM3 and BV-CM4 at 130 µg/L and 97 µg/L, respectively. The highest concentrations of TCE in the A2/B1 zone historically have been detected in the northeast portion of the Site

POTENTIAL VOC SOURCES AND MIGRATION PATHWAYS

Additional investigation of potential on-site sources included the former sump area and associated piping in the western portion of the Site, the unvegetated area in the central portion of the Site, and along the utility corridor. Three MIP borings and one CPT and grab-groundwater boring were advanced near former Sump-4, Sump-5, and along the former catch basin/floor drain piping run to evaluate potential sources. Grab-groundwater sampling results from BV-C10, Sump-2, and Sump-3 as well as MIP profiles for BV-M18, BV-M19, and BV-M20 were not indicative of a release from these former features.

As shown on Figure 4, TCE concentrations in grab-groundwater samples collected from the shallow A1 zone appear to show multiple potential release areas proximal to the utility corridor including:

- An area near HP-01 to the west of the former VCY office building
- An area near BV-C9 and UL-B-2 east of the former VCY office building
- An area near HP-32 and HP-16 in the central area of the Site
- An area near BV-CM4 by the eastern boundary of the Site

There appears to be a correlation between areas of relatively high concentrations of TCE in groundwater and the sanitary sewer both at the Site and along the sanitary sewer alignment to the east. Sanitary sewer discharges into the 15" diameter line flow west along Evandale Avenue from North Whisman Road to Leong Drive. The sanitary sewer turns southwest along Leong Drive before turning west where it continues across the Site. Areas of high concentrations of TCE in groundwater have been identified at several locations along the sanitary sewer alignment on Evandale Avenue between North Whisman Road and Tyrella Avenue and at 870 Leong Drive. These off-site areas of high TCE concentrations in groundwater, as well as the area in the eastern portion of the Site, are not known to be associated with historical operations that involved the use of TCE.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Grab groundwater sampling results indicate distinct TCE plumes located in the western portion and in the eastern portion of Site. TCE impacts to groundwater in the western portion of the Site appears relatively limited in aerial extent and is primarily found in the shallow A1 zone above 25 feet bgs proximal to the sanitary sewer line. TCE impacts to groundwater in the eastern portion of the Site were identified in the shallow and deeper A1 zones, A2/B1 zone, and at one location in the B2 zone. The highest concentrations of TCE in groundwater were identified in the A2/B1 zone proximal to the sanitary sewer line. Off-site releases appear to be contributing to TCE detections in groundwater in the northeast portion of the Site.

The direct correlation between distinct areas of high concentration of TCE in groundwater along the sanitary sewer line in areas of no known historical TCE use strongly suggests that historical discharges of TCE-containing wastes into the sanitary sewer may have occurred and then leaked at various locations both on the Site and offsite resulting in impacts to groundwater. Preferential contaminant migration through utility trench backfill materials does not appear to be a significant pathway based on the grab-groundwater sample results and observed backfill materials.

The distribution of TCE in groundwater, particularly in the A2/B1 zone (Figure 6), appear to indicate that offsite releases are contributing to TCE detections in groundwater in the northeast portion of the Site

The results of this and previous investigation have not identified VOC concentrations in soil or soil vapor on the Site that exceed ESLs for commercial/industrial use. The results of these investigations do not indicate the presence of significant conditions that would impede development of the Site for commercial use.

To further assess groundwater flow direction and VOC distribution, nine new groundwater monitoring wells are proposed: three monitoring wells in the shallow A1 zone, two monitoring wells in the deeper A1 zone, and four monitoring wells in the A2/B1 zone. The locations of the proposed wells are shown on Figures 4 through 6. The monitoring wells will be installed, developed, and sampled as described in the Work Plan.

7.0 SIGNATURES

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August 30, 2013

Project No. 33112-012112.00

8.0 REFERENCES

Phase I Environmental Site Assessment Report, 750 Moffett Boulevard, Mountain View, California, dated October 25, 2004, by URS.

Phase II Environmental Site Assessment Report, Vector Control Property, 750 Moffett Boulevard, Mountain View, California, dated June 29, 2005, prepared by Clayton Group Services.

Additional Investigation Report, Former Vector Control Property, 750 Moffett Boulevard, Mountain View, California, dated September 16, 2005, prepared by Clayton Group Services.

Supplemental Environmental Investigation, Vector Control Yard, 750 Moffett Boulevard, Mountain View, California, dated December 20, 2007, by URS.

Phase II Grab Groundwater Sampling Investigation Report, 870 Leong Drive, dated March 19, 2008, prepared by E_2C, Inc.

Soil and Vapor Sampling Investigation Report, 870 Leong Drive, dated April 8, 2008, prepared by Compliance & Closure, Inc.

Groundwater Sampling Investigation Report, 870 Leong Drive, dated April 2009, prepared by Compliance & Closure, Inc.

Final Removal Action Completion Report for the Catch Basin and Floor Drain Area for the Former Vector Control Yard, dated April 17, 2009, by URS.

No Further Action (NFA) letter regarding URS's Final Removal Action Completion Report for the Catch Basin and Floor Drain Area for the Former Vector Control Yard, dated May 6, 2009, by DTSC.

Regional Board emails to the City, dated May 15, 2008 and May 9, 2009.

Subsurface Environmental Site Assessment Report, County Inn, 850 Leong Drive, dated December 29, 2010, prepared by Stratus Environmental, Inc.

Phase I Environmental Site Assessment, Moffett Gateway Property and Caltrans Approximately 3-Acre Property, dated September 13, 2011, prepared by BVNA.

Limited Subsurface Investigation Report, Proposed Moffett Gateway Property and 3-Acre Caltrans Property at SWC of Moffett Boulevard and US Highway 101, dated January 11, 2012, prepared by BVNA.

Revised Work Plan for Additional Investigation, Moffett-Gateway Property, Former Vector Control Yard, dated March 6, 2013, prepared by BVNA

Grab-Groundwater Assessment and Proposed Well Installations, Middlefield-Ellis-Whisman Regional Groundwater Remediation Program, dated March 27, 2013, prepared by Geosyntec Consultants

TABLES

TABLE 1
SOIL VAPOR ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS (VOCs)
750 Moffett Boulevard, Mountain View, California
Bureau Veritas Project No. 33112-012112.00

Sample ID	Depth (feet bgs)	Sample Date	Carbon Disulfide (ug/m^3)	2-Butanone (ug/m^3)	Acetone (ug/m^3)	Isopropanol (ug/m^3)	Benzene (ug/m^3)	Toluene (ug/m^3)	trans-1,2-DCE (ug/m^3)	cis-1,2-DCE (ug/m^3)	TCE (ug/m^3)	Freon 11 (ug/m^3)	Freon 113 (ug/m^3)	n-Hexane (ug/m^3)	Cyclohexane (ug/m^3)	n-Heptane (ug/m^3)	PCE (ug/m^3)	Ethylbenzene (ug/m^3)	m,p-Xylenes (ug/m^3)	o-Xylene (ug/m^3)	Chloroform (ug/m^3)
SV-1	5	7/2/2013	<2.7	**6.2**	**29**	<8.6	**15**	**25**	<3.5	<3.5	**24**	<4.9	<6.7	<3.1	<3.0	<3.6	<5.9	**6.0**	**20**	**7.8**	<4.3
SV-1	10	7/2/2013	**5.1**	**4.4**	**32**	<8.9	**16**	**20**	<3.6	<3.6	**68**	<14	<20	**9.0**	**4.5**	**7.5**	<17	**4.4**	**15**	**5.0**	<4.4
SV-2	5	3/28/2013	<2.6	**8.3**	**12**	**10**	<2.7	<3.2	<3.4	<3.4	<4.6	<4.8	<6.5	<3.0	<2.9	<3.5	<5.8	<3.7	<3.7	<3.7	<4.2
SV-2	10	3/28/2013	**21**	**12**	<24	<25	<8.2	<9.7	<10	<10	<14	<14	<20	<9.0	<8.8	<11	<17	<11	<11	<11	<13
SV-3	5	3/28/2013	**5.9**	**16**	**60**	<8.9	**9.6**	**8.0**	<3.6	<3.6	<4.9	<5.1	<6.9	<3.2	<3.1	<3.7	<6.1	<3.9	<3.9	<3.9	<4.4
SV-3	10	3/28/2013	<100	<99	<320	<330	<110	<130	<130	<130	<180	<190	<260	<120	<120	<140	<230	<150	<150	<150	<160
SV-4	5	3/28/2013	<4,300	<4,100	<13,000	<14,000	<4,400	<5,200	<5,500	<5,500	<7,400	<7,700	<11,000	<4,900	<4,700	<5,600	<9,300	<6,000	<6,000	<6,000	<6,700
SV-5	5	3/28/2013	<610	<580	<1,900	<1,900	<630	<740	**880**	**1,700**	**2,200**	<1,100	<1,500	<690	<680	<810	<1,300	<850	<850	<850	<960
SV-6	5	3/28/2013	<100	<97	<310	<320	<110	<120	<130	<130	<180	<190	<250	<120	<110	<140	<220	<140	<140	<140	<160
SV-7	5	3/28/2013	<130	<120	<390	<410	<130	<160	<170	<160	<220	<230	<320	<150	<140	<170	<280	<180	<180	<180	<200
SV-7 DUP	5	3/28/2013	<130	<120	<390	<400	<130	<150	<160	<160	<220	<230	<310	<140	<140	<170	<280	<180	<180	<180	<200
SV-8	5	3/28/2013	<2.6	**4.1**	**12**	**16**	<2.7	<3.1	<3.4	<3.3	**19**	**12**	<7.9	<2.9	<2.9	<3.4	<5.7	<3.6	<3.6	<3.6	<4.1
SV-9	5	3/28/2013	**3.3**	**9.1**	<7.9	<8.2	**25**	**36**	<3.3	<3.3	**810**	<4.7	**26**	**76**	**52**	**130**	**12**	**3.7**	**21**	**5.2**	<4.1
SV-10	5	3/28/2013	<2.5	**3.8**	<7.6	<7.8	<2.5	<3.0	<3.2	<3.2	**140**	<4.5	<6.1	<2.8	<2.7	<3.3	<5.4	<3.5	<3.5	<3.5	<3.9
SV-11	5	3/28/2013	<2.6	**3.3**	<7.9	<8.2	<2.7	<3.1	<3.3	<3.3	**5.6**	<4.7	<6.4	<2.9	<2.9	<3.4	**12**	<3.6	<3.6	<3.6	<4.1
SV-12	5	3/28/2013	<2.5	**8.2**	<7.6	<7.9	<2.6	<3.0	<3.2	<3.2	**18**	<4.5	<6.1	<2.8	<2.8	<3.3	<5.4	<3.5	<3.5	<3.5	**22**
Shallow Soil Gas RWQCB ESL r			NE	NE	16,000,000	NE	42	160,000	31,000	NE	300	NE	NE	NE	NE	NE	210	490	52,000	52,000	230
Shallow Soil Gas RWQCB ESL c/i			NE	NE	140,000,000	NE	420	1,300,000	260,000	NE	3,000	NE	NE	NE	NE	NE	2,100	4,900	440,000	440,000	2,300

Notes:
Samples were analyzed using EPA Method TO-15
Results are presented in micrograms per cubic meter ($\mu g/m^3$)
1,1-DCE = 1,1-Dichloroethene
cis-1,2-DCE = cis-1,2-Dichloroethene
trans-1,2-DCE = trans-1,2-Dichloroethene
Freon 11 = Trichlorofluoromethane
PCE = Tetrachloroethene
TCE = Trichloroethene
VC = Vinyl chloride
<x refers to not detected at or above the laboratory reporting limit
RWQCB ESL: San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels for soil gas (vapor intrusion concerns) for Residential (r) and Commercial/Industrial use (c/i), Table E-2, RWQCB ESLs Interim Final February - 2013.
Bolded values are concentrations detected above the laboratory reporting limit
NE = regulatory screening level not established
DUP = Duplicate Sample

Table 2
Soil Sample Analytical Results
Moffett Gateway Property
750 Moffett Boulevard, Mountain View, California
July 2013

Location	Date	Soil Sample Depth (feet below ground surface)	Acetone	cis-1,2-DCE	Ethylbenzene	trans-1,2-DCE	TCE	Xylenes
BV-C9	7/1/2013	6	**100**	**13**	**5.6**	<3.8	**32**	39
BV-C9	7/1/2013	10	<41	**21**	<4.1	**5.9**	**150**	<8.1
		Shallow Soil RWQCB ESL r	500	190	2,900	670	430	2,300
		Shallow Soil RWQCB ESL c/i	500	190	3,300	670	700	2,300

Notes:
Analyzed by EPA Method 8260B
Results in micrograms per kilogram (µg/Kg)
cis-1,2-DCE = cis-1,2-Dichloroethene
trans-1,2-DCE = trans-1,2-Dichloroethene
TCE = Trichloroethene
< = not detected at or above laboratory reporting limit of x
Bolded values are concentrations detected above the laboratory reporting limit
RWQCB ESL: San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels for shallow soils for Residential (r) and Commercial/Industrial use (c/i), Table A, RWQCB ESLs Interim Final February - 2013.

Table 3
Grab-Groundwater Sample Analytical Results
Moffett Gateway Property
750 Moffett Boulevard, Mountain View, California
June and July, 2013

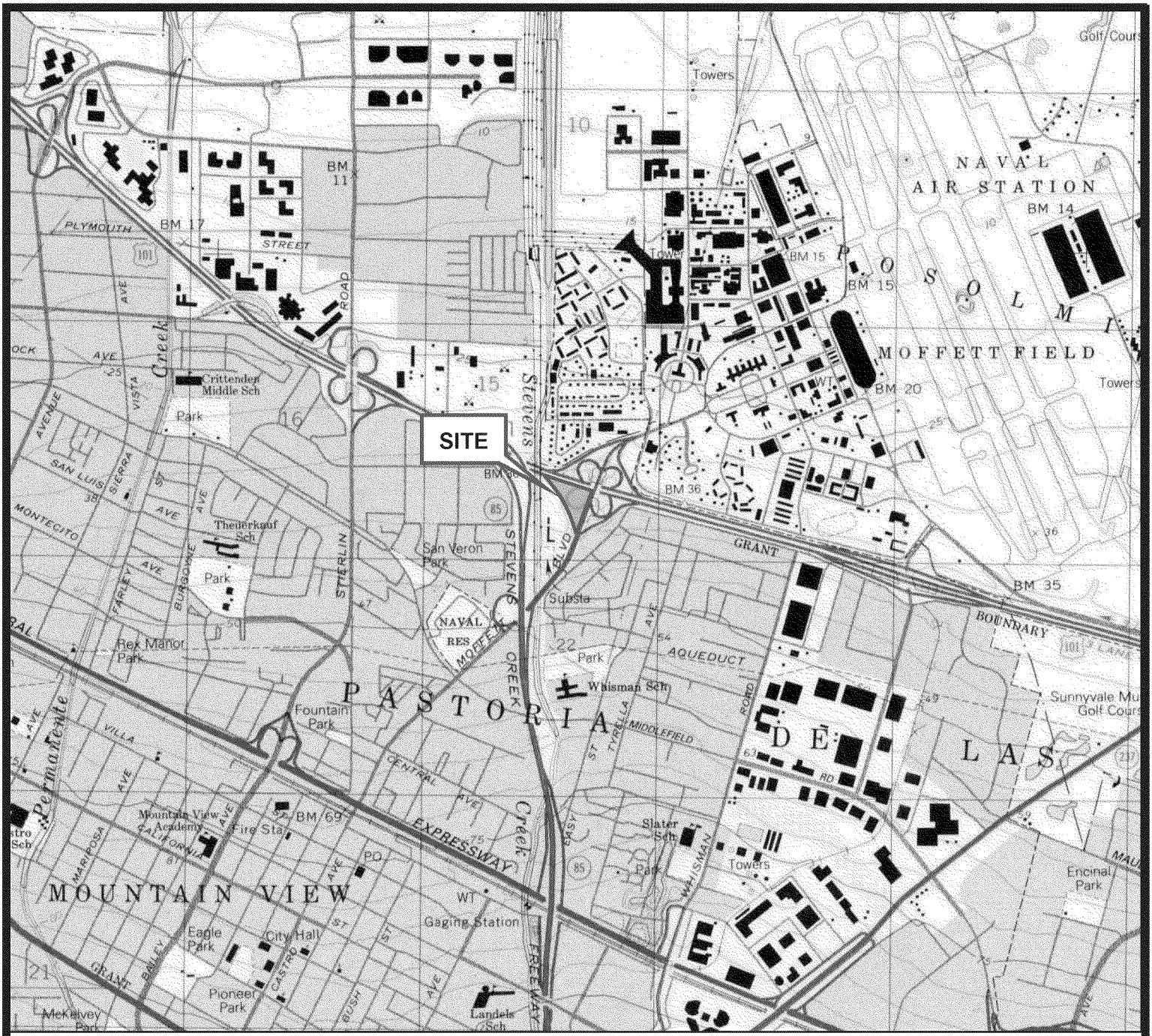
Location	Date	Groundwater Sampling Intervals (feet below ground surface)	Acetone	Chloroform	Benzene	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	Toluene	TCE	VC	Xylenes
BV-C1	6/18/2013	16-18	<50	<1.0	<0.5	<0.5	**2.5**	**0.55**	<0.5	**22**	<0.5	<1.0
BV-C1	6/18/2013	20-22	<50	<1.0	**0.82**	<0.5	**45**	**8.5**	**1.1**	**24**	**4.2**	<1.0
BV-C1	6/18/2013	31-34	<50	<1.0	**0.68**	**4.9**	**330**	**85**	**0.98**	**4.7**	**23**	<1.0
BV-C1	6/18/2013	37-40	<50	<1.0	**2.1**	**35**	**1,300**	**120**	**2.5**	**5.7**	**62**	<1.0
BV-C1	6/18/2013	44-46	<100	<2.0	**2.9**	**2.7**	**120**	**17**	**3.0**	**14**	<1.0	<2.0
BV-C2	6/18/2013	19-23	<50	<1.0	<0.5	<0.5	**5.5**	**1.5**	**0.52**	**7.2**	**0.56**	<1.0
BV-C2	6/18/2013	33-35	<500	<10	<5.0	**43**	**480**	**160**	<5.0	**300**	**57**	<10
BV-C2	6/18/2013	54-58	<50	<1.0	**1.0**	<0.5	**1.5**	**1.0**	**1.3**	**7.3**	<0.5	<1.0
BV-CM3	6/18/2013	18-22	<50	<1.0	<0.5	<0.5	**10**	**9.3**	<0.5	**66**	**1.5**	<1.0
BV-CM3	6/18/2013	35-39	<10,000	<200	<100	**260/490**	**4,400/6,700**	**510/920**	<100	**7,000/16,000**	**170/260**	<200
BV-CM3	6/18/2013	45-48	<50	<1.0	**0.69**	**2.5**	**64**	**23**	**0.83**	**130**	**3.1**	<1.0
BV-CM3	6/18/2013	54-58	<50	<1.0	**0.89**	**2.4**	**52**	**18**	**0.76**	**130**	**3.2**	<1.0
BV-CM4	6/19/2013	20-24	<50	<1.0	<0.5	**2**	**170**	**400**	<0.5	**110**	**58**	<1.0
BV-CM4	6/19/2013	34-38	<50	<1.0	**0.53**	**31**	**92**	**16**	**0.65**	**550**	**20**	<1.0
BV-CM4	6/19/2013	45-48	<50	<1.0	<0.5	<0.5	**3.4**	**4.1**	**0.54**	**5.2**	<0.5	<1.0
BV-CM4	6/19/2013	54-58	<50	<1.0	**0.83**	<0.5	**4.2**	**7.1**	**1**	**29**	<0.5	<1.0
BV-CM4	6/19/2013	65-69	<50	<1.0	**0.73**	**0.76**	**7.8**	**10**	**0.82**	**97**	<0.5	<1.0
BV-CM4	6/19/2013	74-77	<50	<1.0	<0.5	**1.7**	**9.5**	**7.3**	**0.56**	**310**	<0.5	<1.0
BV-C5	6/19/2013	16-18	<50	<1.0	**1.2**	**1.9**	**190**	**94**	**1.4**	**80**	**8.4**	<1.0
BV-C5	6/19/2013	34 - 36	<50	<1.0	<0.5	**37/24**	**760/930**	**190/210**	**0.83/0.67**	**1,200/1,400**	**35/24**	<1.0
BV-C5	6/19/2013	44 - 46	<50	<1.0	**0.72**	**48**	**820**	**500**	**1.4**	**2,500**	**38**	<1.0
BV-C5	6/19/2013	56 - 60	<50	<1.0	<0.5	<0.5	**8.4**	**4.2**	**0.56**	**29**	<0.5	<1.0
BV-C6	6/20/2013	18 - 20	<50	<1.0	<0.5	<0.5	**68**	**140**	<0.5	**52**	**1.1**	**1.4**
BV-C6	6/20/2013	31 - 34	<50	<1.0	**0.72**	<0.5	**17**	**19**	**0.96**	**18**	<0.5	**2.5**
BV-C6	6/20/2013	54-58	**59**	<1.0	<0.5	<0.5	**3.4**	**8.7**	**0.66**	**5.5**	<0.5	**3.2**
BV-C7	6/20/2013	36-40	<50	<1.0	<0.5	**1.7**	**860**	**160**	<0.5	**210**	**1.7**	<1.0
BV-C7	6/20/2013	43-45	<50	<1.0	<0.5	**1.3**	**200**	**150**	<0.5	**880**	**1.8**	<1.0
BV-C7	6/20/2013	48-52	<50	<1.0	<0.5	<0.5	**1.1**	<0.5	<0.5	**9.5**	<0.5	<1.0
BV-C7	6/20/2013	59 - 63	<50	<1.0	<0.5	<0.5	**3.1**	**2.1**	**0.5**	**12**	<0.5	<1.0
BV-C8	7/1/2013	18-22	<50	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	**0.76**	<0.5	<1.0
BV-C8	7/1/2013	38-42	<50	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0
BV-C8	7/1/2013	61-65	<50	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	**4.2**	<0.5	<1.0
BV-C9	7/1/2013	14-18	<50	<1.0	<0.5	**0.72**	**12**	**1.2**	<0.5	**440**	<0.5	<1.0
BV-C9	7/1/2013	22-26	<50	<1.0	<0.5	<0.5	**96/87**	**6.5/6.0**	<0.5	**74/83**	<0.5	<1.0
BV-C9	7/1/2013	36-38	<50	<1.0	<0.5	<0.5	**3.4**	<0.5	<0.5	**7.8**	<0.5	<1.0
BV-C9	7/1/2013	52-56	<50	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	**6.1**	<0.5	<1.0
BV-C10	7/1/2013	18-20	<50	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0
BV-C10	7/1/2013	22-24	<50	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0
BV-C10	7/1/2013	43-47	<50	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	<0.5	<1.0
BV-C10	7/1/2013	63-67	<50	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0

Table 3
Grab-Groundwater Sample Analytical Results
Moffett Gateway Property
750 Moffett Boulevard, Mountain View, California
June and July, 2013

Location	Date	Groundwater Sampling Intervals (feet below ground surface)	Acetone	Chloroform	Benzene	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	Toluene	TCE	VC	Xylenes
BV-C11	7/2/2013	18-20	<50	<1.0	<0.5	<0.5	**28**	**0.88**	<0.5	**21**	<0.5	<1.0
BV-C11	7/2/2013	23-25	<50	<1.0	<0.5	<0.5	**48**	**3.7**	<0.5	**5.1**	<0.5	<1.0
BV-C11	7/2/2013	28-30	<50	<1.0	<0.5	<0.5	**1.3/1.2**	<0.5	<0.5	**1.2/1.1**	<0.5	<1.0
BV-C11	7/2/2013	42-46	<50	<1.0	<0.5	<0.5	**0.66**	<0.5	<0.5	**0.89**	<0.5	<1.0
BV-C12	7/2/2013	18 - 22	<50	<1.0	<0.5	<0.5	**1.0**	<0.5	<0.5	**1.8**	<0.5	<1.0
BV-C12	7/2/2013	40-42	<50	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0
BV-C12	7/2/2013	50-54	<50	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	**0.69**	<0.5	<1.0
BV-C13	6/20/2013	34-36	<50	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.1**
BV-C13	6/20/2013	46-50	<50	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0
BV-C14	6/20/2013	20-23	<50	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0
BV-C14	6/20/2013	32-36	<50	<1.0	**0.83**	<0.5	<0.5	<0.5	**1.1**	<0.5	<0.5	<1.0
BV-C15	7/3/2013	20 - 23	<50	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	**0.86**	**0.51**	<1.0
BV-C15	7/3/2013	28-32	<50	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	**1.2/1.3**	<0.5	<1.0
BV-C15	7/3/2013	48-50	<50	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	**3.2**	<0.5	<1.0
BV-C16	7/2/2013	20-24	<50	<1.0	<0.5	**4.3**	**2,000**	**300**	<0.5	**2.6**	**19**	<1.0
BV-C16	7/2/2013	45-48	<50	<1.0	<0.5	<0.5	**0.73**	<0.5	<0.5	**3.0**	<0.5	<1.0
BV-C17	7/3/2013	18-22	<50	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	**1.3**	<0.5	<1.0
BV-C17	7/3/2013	46-49	<50	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	**0.97**	<0.5	<1.0
BV-C17	7/3/2013	59-63	<50	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	**3.8**	<0.5	<1.0
BV-SD1	6/21/2013	14-18	**4000**	<1.0	<0.5	<0.5	**28**	<0.5	**0.5**	**56**	<0.5	**87**
BV-SD2	6/21/2013	14-18	<50	<1.0	<0.5	<0.5	**29**	**6.2**	<0.5	**14**	<0.5	<1.0
BV-SS1	6/21/2013	12-15	**740**	<1.0	<0.5	<0.5	**4.8**	<0.5	**6.1**	**18**	<0.5	**55**
BV-SS2	7/3/2013	13-15	<50	<1.0	<0.5	<0.5	**8.0**	**0.98**	<0.5	**10**	<0.5	<1.0
		Groundwater RWQCB ESL	1500	70	1.0	6.0	6.0	10	40	**5.0**	0.5	20

Notes:
Analyzed by EPA Method 8260B
Results in micrograms per liter (µg/L)
1,1-DCE = 1,1-Dichloroethene
cis-1,2-DCE = cis-1,2-Dichloroethene
trans-1,2-DCE = trans-1,2-Dichloroethene
TCE = Trichloroethene
VC = Vinyl chloride
/ = sample result/duplicate sample result
< = not detected at or above laboratory reporting limit of x
Bolded values are concentrations detected above the laboratory reporting limit
RWQCB ESL: San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels for groundwater (drinking water resource), Table F-1a, RWQCB ESLs Interim Final February - 2013.

FIGURES



Source: TOPO! © 2000 National Geographic Holdings

Note: Location Information isApproximate

1 0 1/2 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

Portion of the 7.5-Minute Series Mountain View, California
Quadrangle Topographic Map (Datum: NAD 83)
United States Department of the Interior
Geological Survey
1997

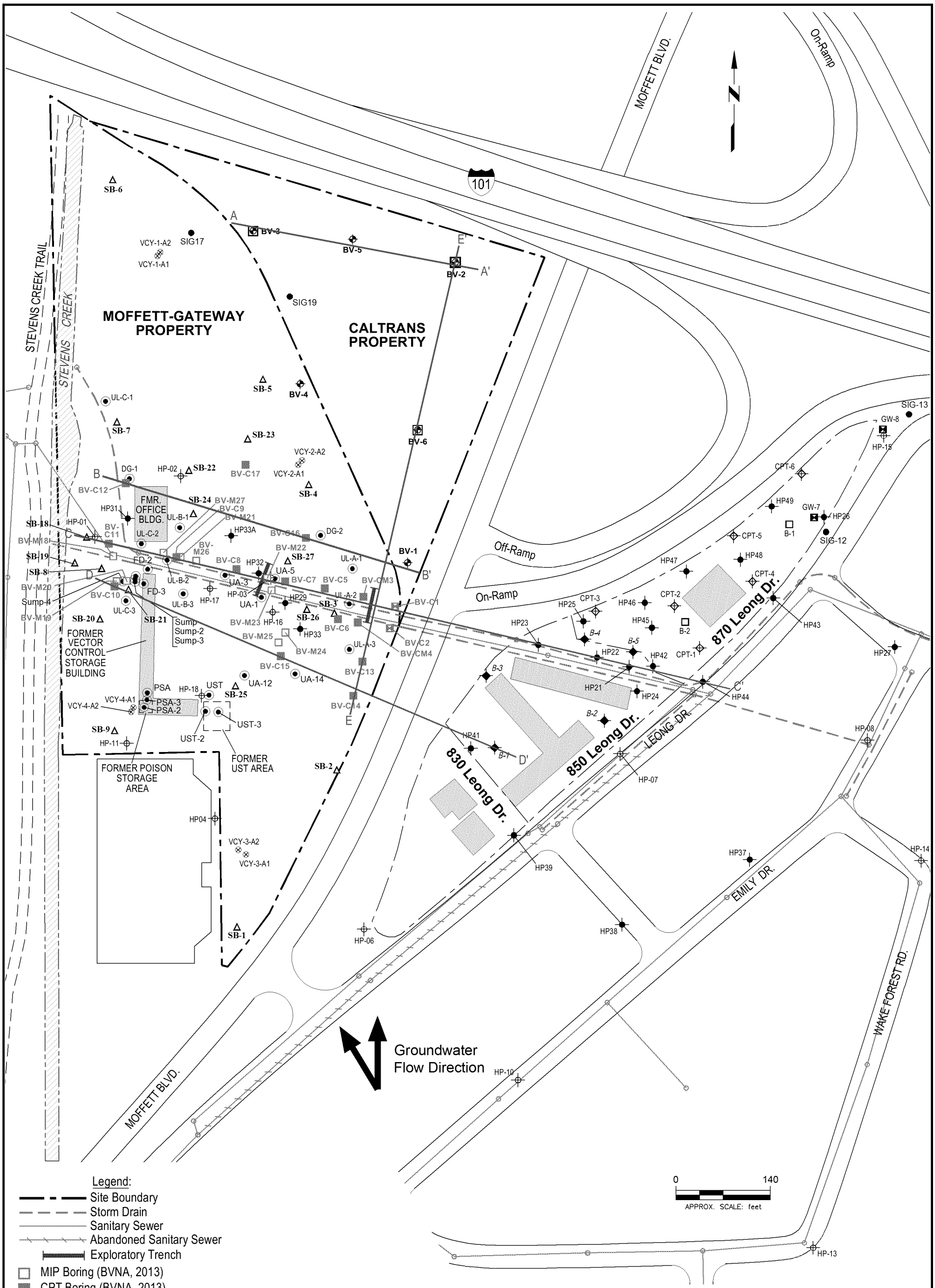
N

CALIF

QUADRANGLE LOCATION

SITE LOCATION	FIGURE
Moffett-Gateway Property Mountain View, California Project No. 33111-012112.00	1

BUREAU VERITAS



SITE PLAN SHOWING CROSS-SECTION LOCATIONS

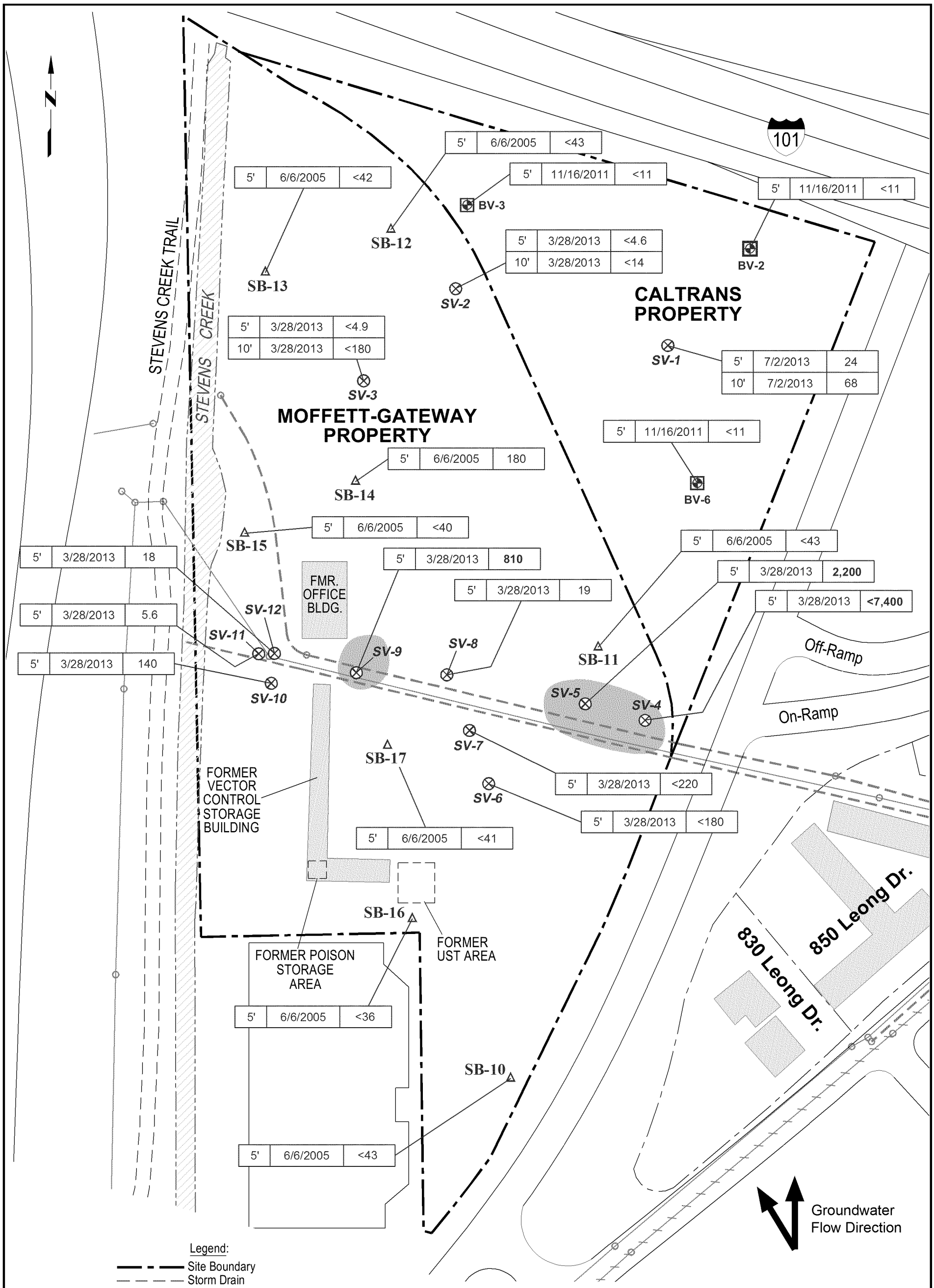
MOFFETT-GATEWAY PROPERTY
750 MOFFETT BLVD.
MOUNTAIN VIEW, CALIFORNIA

Project No. 33112-012112.00

Figure **2**

08/29/13
SITE0813.DWG

BUREAU VERITAS


N
STEVENS CREEK TRAIL
STEVENS CREEK
101
5' 6/6/2005 <43
5' 11/16/2011 <11
5' 6/6/2005 <42
BV-3
SB-12
SB-13
5' 11/16/2011 <11
BV-2
5' 3/28/2013 <4.6
10' 3/28/2013 <14
SV-2
CALTRANS PROPERTY
SV-1
5' 7/2/2013 24
10' 7/2/2013 68
5' 3/28/2013 <4.9
10' 3/28/2013 <180
SV-3
MOFFETT-GATEWAY PROPERTY
5' 11/16/2011 <11
BV-6
5' 6/6/2005 180
SB-14
5' 6/6/2005 <40
SB-15
5' 6/6/2005 <43
5' 3/28/2013 18
5' 3/28/2013 810
5' 3/28/2013 2,200
FMR. OFFICE BLDG.
5' 3/28/2013 19
5' 3/28/2013 <7,400
5' 3/28/2013 5.6
SV-12
SV-11
SV-9
SV-8
SB-11
Off-Ramp
5' 3/28/2013 140
SV-10
SV-5
SV-4
On-Ramp
SV-7
SB-17
FORMER VECTOR CONTROL STORAGE BUILDING
5' 3/28/2013 <220
SV-6
5' 3/28/2013 <180
5' 6/6/2005 <41
SB-16
FORMER UST AREA
850 Leong Dr.
830 Leong Dr.
FORMER POISON STORAGE AREA
5' 6/6/2005 <36
SB-10
5' 6/6/2005 <43
Groundwater Flow Direction
Legend:
Site Boundary
Storm Drain
Sanitary Sewer
Abandoned Sanitary Sewer
Soil Vapor Boring Location
Groundwater and/or SV Boring (Clayton, Sept. 2005)
Soil, Groundwater, and Soil Vapor (SV) Sample Location (Bureau Veritas, 2011)
5' 7/2/2013 24
Trichloroethene (TCE) Concentration (ug/m3)
Sample Date
Sample Depth (feet bgs)
TCE Concentration Color Key:
>300 ug/m3
0 100
APPROX. SCALE: feet
TCE CONCENTRATIONS IN SOIL VAPOR SAMPLES
MOFFETT-GATEWAY PROPERTY
750 MOFFETT BLVD.
MOUNTAIN VIEW, CALIFORNIA
Project No. 33112-012112.00
Figure
3
08/29/13
SITE0813.DWG
BUREAU VERITAS

TCE Concentration Color Key:
>5 - 10 ug/L
>10 - 100 ug/L
>100 - 1,000 ug/L
>1,000 - 10,000 ug/L
>10,000 ug/L

MOFFETT-GATEWAY PROPERTY
CALTRANS PROPERTY
FORMER VECTOR CONTROL STORAGE BUILDING
FORMER POISON STORAGE AREA
FORMER UST AREA
FMR. OFFICE BLDG.
STEVENS CREEK
STEVENS CREEK TRAIL
MOFFETT BLVD.
On-Ramp
Off-Ramp
101
LEONG DR.
830 Leong Dr.
850 Leong Dr.
870 Leong Dr.
EMILY DR.
WAKE FOREST RD.
Groundwater Flow Direction
0 140
APPROX. SCALE: feet

Legend:
Site Boundary
Storm Drain
Sanitary Sewer
Abandoned Sanitary Sewer
Exploratory Trench
(440) Trichloroethene (TCE) Concentration (ug/L)
Proposed Monitoring Well
Soil and Groundwater Sample Location (Bureau Veritas, 2011)
Soil, Groundwater, and Soil Vapor (SV) Sample Location (Bureau Veritas, 2011)
Groundwater Boring (E_2C, Mar. 2008)
Soil and/or SV Boring (CCI, Apr. 2008)
CPT/HP Boring (CCI, Apr. 2009)
Groundwater Boring (CCI, Apr. 2009)
CPT/HP Boring (Stratus, Aug. 2010)
CPT/HP Boring (EPA, Sept. 2005)
CPT/HP Boring (EPA, Oct. 2011)
Trench Soil Sample (URS, July 2005)
Soil and/or Groundwater Boring (URS, 2005/2007)
Piezometer (URS, June 2007)
Groundwater and/or SV Boring (Clayton, Sept. 2005)
Groundwater Boring (Kleinfelder, Jan. 2002)
CPT/HP Boring (SI Group, Sept. 2003)
MIP Boring (BVNA, 2013)
CPT Boring (BVNA, 2013)
CPT/MIP Boring (BVNA, 2013)

TCE CONCENTRATIONS IN GROUNDWATER SAMPLES IN THE A1 ZONE - SHALLOW (<25 ft bgs)

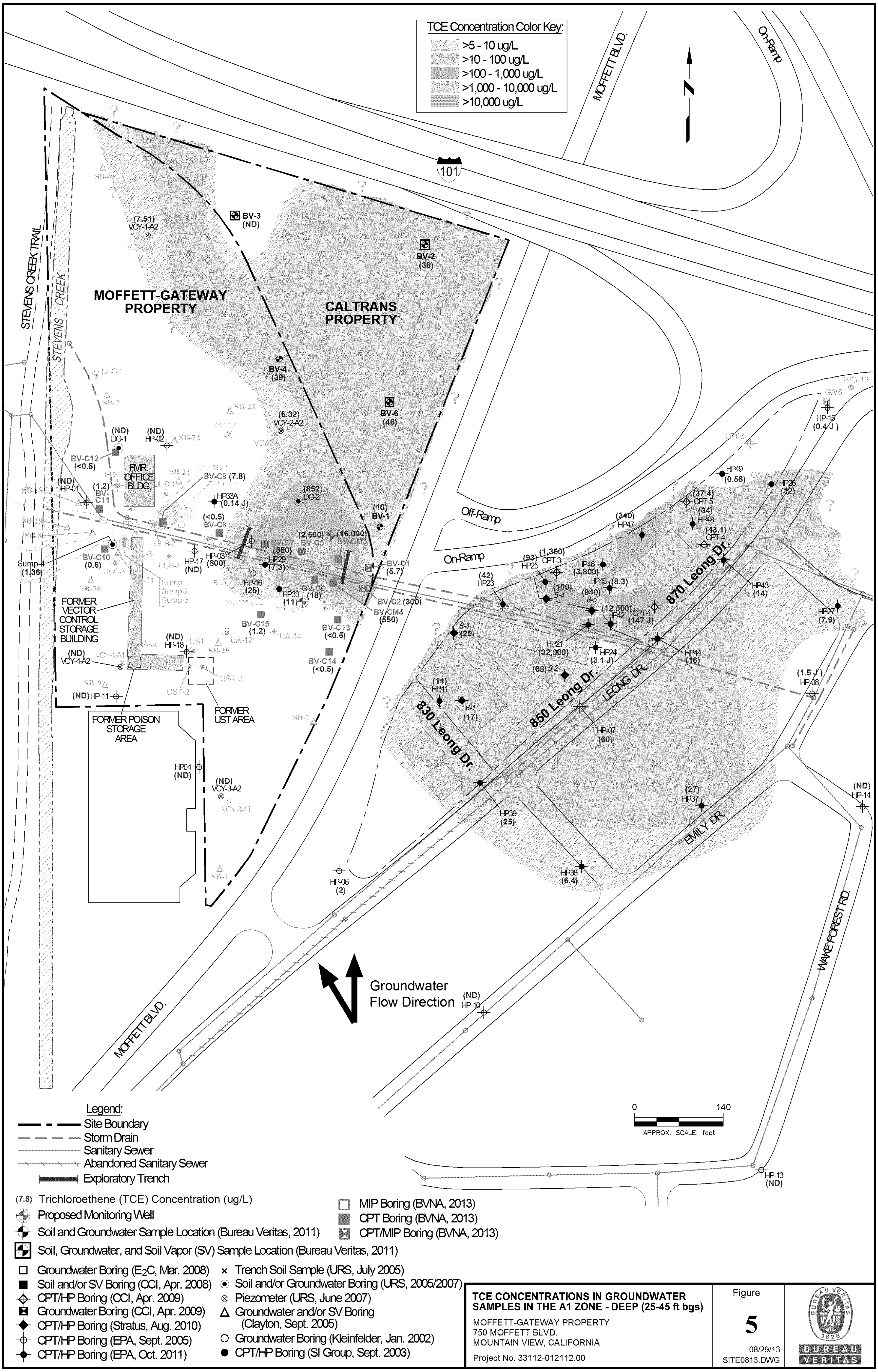
MOFFETT-GATEWAY PROPERTY
750 MOFFETT BLVD.
MOUNTAIN VIEW, CALIFORNIA

Project No. 33112-012112.00

Figure 4

08/29/13
SITE0813.DWG

BUREAU VERITAS


TCE Concentration Color Key:
>5 - 10 ug/L
>10 - 100 ug/L
>100 - 1,000 ug/L
>1,000 - 10,000 ug/L
>10,000 ug/L
N
MOFFETT BLVD.
On-Ramp
101
STEVENS CREEK TRAIL
STEVENS CREEK
MOFFETT-GATEWAY PROPERTY
CALTRANS PROPERTY
BV-3 (ND)
BV-2 (36)
BV-4 (39)
BV-6 (46)
(10) BV-1
(7.51) VCY-1-A2
VCY-1-A1
SIG17
SIG19
BV-5
SB-6
SB-5
SB-7
SB-23
SB-22
SB-24
UL-C-1
(6.32) VCY-2-A2
VCY-2-A1
BV-C17
SB-4
(ND) DG-1
(ND) HP-02
BV-C12 (<0.5)
FMR. OFFICE BLDG.
HP31
UL-B-1
BV-M27
BV-C9 (7.8)
BV-M21
(ND) HP-01
(1.2) BV-C11
SB-18
SB-19
SB-8
HP33A (0.14 J)
(852) DG-2
BV-M22
(<0.5) BV-C8
BV-M26
UL-B-2
FD-2
FD-3
Sump-4 (1.36)
BV-C10 (0.6)
UL-C-3
UL-B-3
SB-20
SB-21
Sump
Sump-2
Sump-3
HP-17 (ND)
HP-03 (800)
HP29 (7.3)
BV-C7 (880)
(2,500) BV-C5
(16,000) BV-CM3
BV-C1 (5.7)
HP-16 (25)
HP33 (11)
BV-C6 (18)
BV-C2 (300)
BV-CM4 (550)
BV-M25
BV-M24
UA-3
BV-C15 (1.2)
BV-C13 (<0.5)
BV-C14 (<0.5)
UA-12
UA-14
FORMER VECTOR CONTROL STORAGE BUILDING
PSA
(ND) HP-18
UST
SB-25
(ND) VCY-4-A2
VCY-4-A1
UST-2
UST-3
SB-9
(ND) HP-11
FORMER POISON STORAGE AREA
FORMER UST AREA
SB-2
HP04 (ND)
(ND) VCY-3-A2
VCY-3-A1
SB-1
HP-06 (2)
Off-Ramp
On-Ramp
SIG-13
GW8
HP-15 (0.4 J)
CPT-6
HP49 (0.56)
GW7
HP26 (12)
B-1
(37.4) CPT-5
(34) HP48
(340) HP47
(43.1) CPT-4
(1,350) CPT-3
(93) HP25
(42) HP23
HP46 (3,800)
HP45 (8.3)
(100) B-4
(940) B-5
(12,000) HP42
CPT-1 (147 J)
870 Leong Dr.
HP43 (14)
HP27 (7.9)
B-3 (20)
HP21 (32,000)
HP24 (3.1 J)
HP44 (16)
(68) B-2
(1.5 J) HP-08
(14) HP41
B-1 (17)
830 Leong Dr.
850 Leong Dr.
LEONG DR.
HP-07 (60)
HP39 (25)
(27) HP37
EMILY DR.
HP38 (6.4)
(ND) HP-14
WAKE FOREST RD.
Groundwater Flow Direction
(ND) HP-10
MOFFETT BLVD.
0 140
APPROX. SCALE: feet
HP-13 (ND)
Legend:
Site Boundary
Storm Drain
Sanitary Sewer
Abandoned Sanitary Sewer
Exploratory Trench
(7.8) Trichloroethene (TCE) Concentration (ug/L)
Proposed Monitoring Well
Soil and Groundwater Sample Location (Bureau Veritas, 2011)
Soil, Groundwater, and Soil Vapor (SV) Sample Location (Bureau Veritas, 2011)
Groundwater Boring (E2C, Mar. 2008)
Soil and/or SV Boring (CCI, Apr. 2008)
CPT/HP Boring (CCI, Apr. 2009)
Groundwater Boring (CCI, Apr. 2009)
CPT/HP Boring (Stratus, Aug. 2010)
CPT/HP Boring (EPA, Sept. 2005)
CPT/HP Boring (EPA, Oct. 2011)
Trench Soil Sample (URS, July 2005)
Soil and/or Groundwater Boring (URS, 2005/2007)
Piezometer (URS, June 2007)
Groundwater and/or SV Boring (Clayton, Sept. 2005)
Groundwater Boring (Kleinfelder, Jan. 2002)
CPT/HP Boring (SI Group, Sept. 2003)
MIP Boring (BVNA, 2013)
CPT Boring (BVNA, 2013)
CPT/MIP Boring (BVNA, 2013)
TCE CONCENTRATIONS IN GROUNDWATER SAMPLES IN THE A1 ZONE - DEEP (25-45 ft bgs)
MOFFETT-GATEWAY PROPERTY
750 MOFFETT BLVD.
MOUNTAIN VIEW, CALIFORNIA
Project No. 33112-012112.00
Figure
5
08/29/13
SITE0813.DWG
BUREAU VERITAS

TCE Concentration Color Key:
>5 - 10 ug/L
>10 - 100 ug/L
>100 - 1,000 ug/L
>1,000 - 10,000 ug/L
>10,000 ug/L

MOFFETT BLVD.
On-Ramp
N
101
STEVENS CREEK TRAIL
STEVENS CREEK
MOFFETT-GATEWAY PROPERTY
CALTRANS PROPERTY
BV-3 (14)
BV-5 (330)
BV-2 (480)
BV-4 (1,000)
BV-6 (480)
BV-1 (630)
BV-C1 (14)
BV-C2 (7.3)
BV-CM4 (97)
BV-C13 (<0.5)
BV-C6 (5.5)
BV-C15 (3.2)
BV-C16 (3)
BV-C17 (3.8)
BV-C9 (6.1)
BV-C8 (4.2)
BV-C7 (12)
BV-C5 (29)
BV-CM3 (130)
BV-C12 (0.69)
BV-C11 (ND)
BV-C10 (<0.5)
HP-01
HP31 (0.89)
HP33A (ND)
HP32 (2.5)
HP29 (2.4)
HP-03 (1.1)
HP33 (1.4)
HP-16 (0.3 J)
HP-17 (1.4)
HP-02 (ND)
HP-04 (ND)
HP-11 (3.2)
HP-18 (ND)
HP-06 (ND)
HP-10 (ND)
HP-13 (ND)
HP-14 (62)
HP-15 (170)
HP-08 (160)
HP25 (190)
HP46 (590)
HP45 (210)
HP22 (490)
HP42 (300)
HP21 (18,000)
HP24 (4,200)
HP44 (120)
HP47 (480)
HP48 (37)
HP49 (33)
HP26 (13)
HP27 (120)
HP37 (510)
HP38 (150)
CPT-6 (46.1)
CPT-4 (32.2)
CPT-2 (311)
B-4 (180)
B-5 (29,000)
B-2 (230)
B-1 (540)
870 Leong Dr.
850 Leong Dr.
830 Leong Dr.
LEONG DR.
EMILY DR.
WAKE FOREST RD.
Off-Ramp
On-Ramp
FMR OFFICE BLDG.
FORMER VECTOR CONTROL STORAGE BUILDING
FORMER POISON STORAGE AREA
FORMER UST AREA
Sump
Sump-2
Sump-3
PSA
UST
UST-2
UST-3
SB-1
SB-2
SB-6
SB-7
SB-9
SB-11
SB-12
SB-20
SB-21
SB-22
SB-24
SB-25
SB-26
UA-1
UA-12
UA-14
ULC-1
ULB-2
ULB-3
ULC-3
DG-1
VCY-1-A1
VCY-1-A2
VCY-2-A1
VCY-3-A1
VCY-3-A2
VCY-4-A1
VCY-4-A2
BIG17
Groundwater Flow Direction
MOFFETT BLVD.
0 140
APPROX. SCALE: feet

Legend:
Site Boundary
Storm Drain
Sanitary Sewer
Abandoned Sanitary Sewer
Exploratory Trench

(6.1) Trichloroethene (TCE) Concentration (ug/L)
Proposed Monitoring Well
Soil and Groundwater Sample Location (Bureau Veritas, 2011)
Soil, Groundwater, and Soil Vapor (SV) Sample Location (Bureau Veritas, 2011)
Groundwater Boring (E_2C, Mar. 2008)
Soil and/or SV Boring (CCI, Apr. 2008)
CPT/HP Boring (CCI, Apr. 2009)
Groundwater Boring (CCI, Apr. 2009)
CPT/HP Boring (Stratus, Aug. 2010)
CPT/HP Boring (EPA, Sept. 2005)
CPT/HP Boring (EPA, Oct. 2011)
MIP Boring (BVNA, 2013)
CPT Boring (BVNA, 2013)
CPT/MIP Boring (BVNA, 2013)
× Trench Soil Sample (URS, July 2005)
Soil and/or Groundwater Boring (URS, 2005/2007)
⊗ Piezometer (URS, June 2007)
Groundwater and/or SV Boring (Clayton, Sept. 2005)
Groundwater Boring (Kleinfelder, Jan. 2002)
CPT/HP Boring (SI Group, Sept. 2003)

TCE CONCENTRATIONS IN GROUNDWATER SAMPLES IN THE A2/B1 ZONES (45-65 ft bgs)

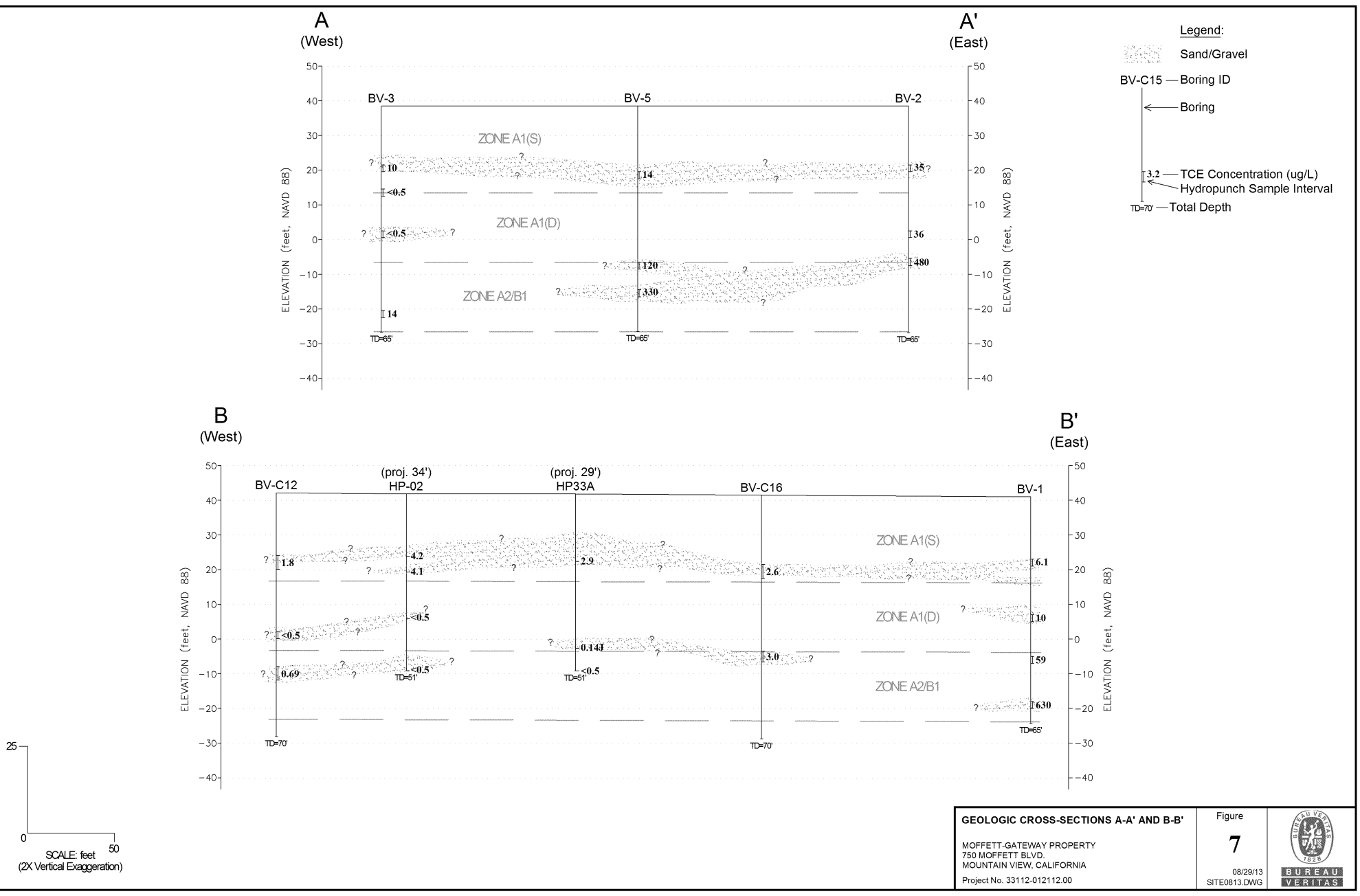
MOFFETT-GATEWAY PROPERTY
750 MOFFETT BLVD.
MOUNTAIN VIEW, CALIFORNIA

Project No. 33112-012112.00

Figure 6

08/29/13
SITE0813.DWG

BUREAU VERITAS



GEOLOGIC CROSS-SECTIONS A-A' AND B-B'

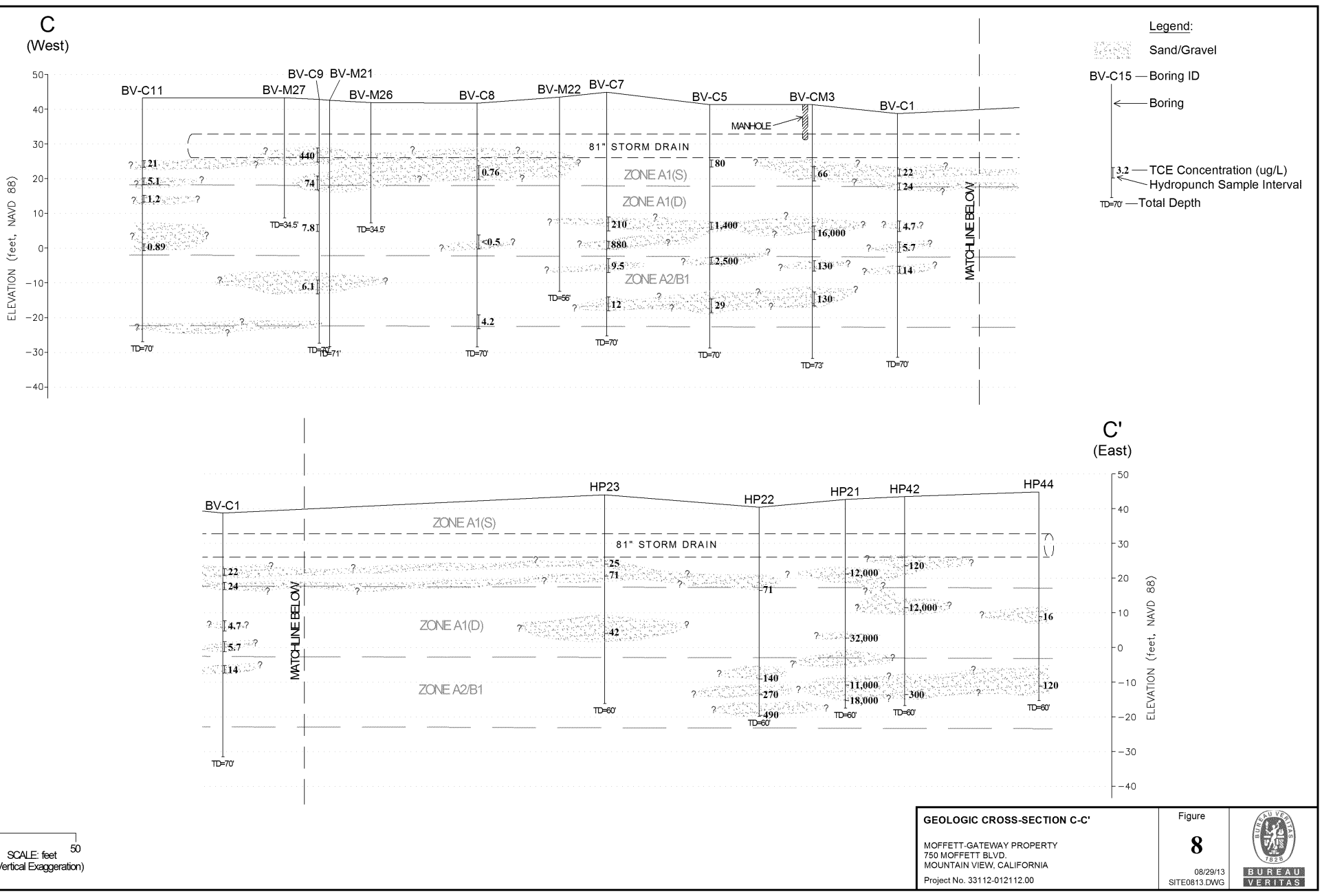
MOFFETT-GATEWAY PROPERTY
750 MOFFETT BLVD.
MOUNTAIN VIEW, CALIFORNIA

Project No. 33112-012112.00

Figure
7

08/29/13
SITE0813.DWG

BUREAU VERITAS



GEOLOGIC CROSS-SECTION C-C'

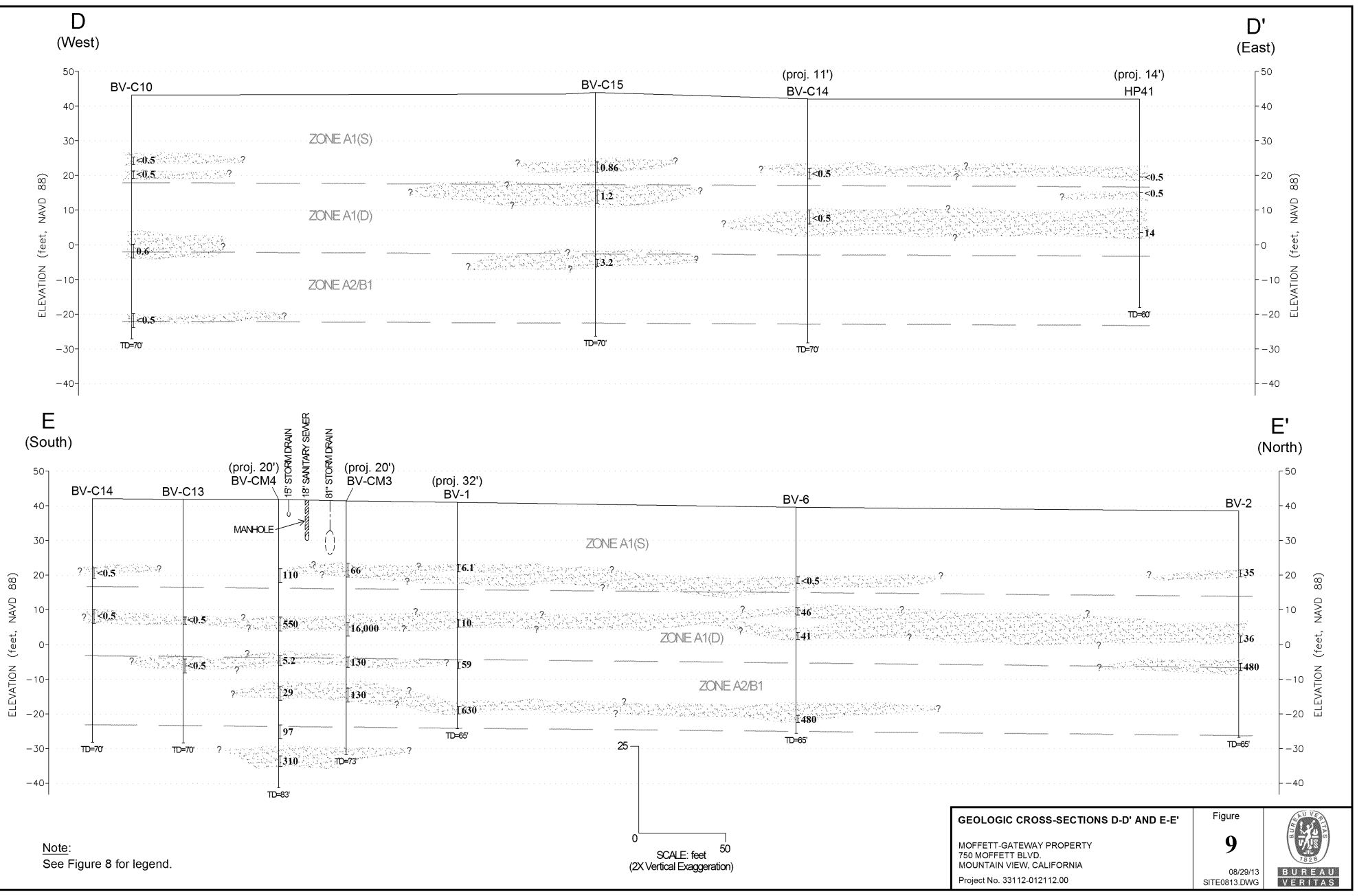
MOFFETT-GATEWAY PROPERTY
750 MOFFETT BLVD.
MOUNTAIN VIEW, CALIFORNIA

Project No. 33112-012112.00

Figure
8

08/29/13
SITE0813.DWG

BUREAU VERITAS



Note:
See Figure 8 for legend.

GEOLOGIC CROSS-SECTIONS D-D' AND E-E'

MOFFETT-GATEWAY PROPERTY
750 MOFFETT BLVD.
MOUNTAIN VIEW, CALIFORNIA

Project No. 33112-012112.00

Figure
9

08/29/13
SITE0813.DWG

BUREAU VERITAS

APPENDIX A

SANTA CLARA VALLEY WATER DISTRICT PERMITS

Santa Clara Valley Water District

5750 Almaden Expressway
San Jose, CA 95118-3686
(408) 265-2600

APPLICATION TO DRILL EXPLORATORY BORINGS

FC 285 (10-18-10)

Date Issued: 4-5-13	Expiration Date: 10-5-13	District Permit No.: 13E0036
Client (if different from property owner): SAME →	**Property Owner:** City of Mountain View	Name of Business/Residence at Site: NA
Client's Address: City, State, Zip	Property Owner's Address: 500 Castro Street City, State, Zip Mountain View, CA 94039	Address of Site: 750 Moffett Blvd City, State, Zip Mountain View, CA
Telephone No.:	Telephone No.: 650-903-6630	Assessor's Parcel No. of Site: Book 153 Page 19 Parcel 007

Consulting Company Name: Bureau Veritas North America, Inc.	Drilling Company Name: Vironex Environmental Field Srvcs	
Address: 2430 Camino Ramon, #122 City, State, Zip San Ramon, CA 94583	Address: 1641 Challenge Drive City, State, Zip Concord, CA 94520	
Telephone No.: 925 426 2600	Telephone No.: 925 849 6973	C-57/C-61 License No.: 705927
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

In space at right, sketch location of proposed boring(s) in sufficient detail to identify location. In addition to distances to nearest street and intersection, show distances to any existing structures, landmarks, or topographic features.

How many borings will be installed on parcel?
25

☐ Proposed borings on District property/easement (See General Condition F, page 2.)
☐ Within 50 feet of the top of a creek bank or District facility

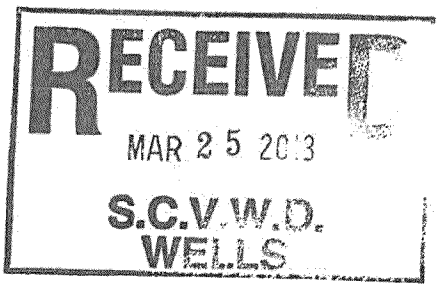
Proposed depth of boring(s):
☒ 45 to 150 feet
☐ 151 to 300 feet
☐ Over 300 feet

Type of boring(s):
☐ Hollow stem
☐ Rotary
☒ CPT/Hydropunch
☒ Other: MIP

NOTE: No permit is required for borings under 45 feet deep.

SITE PLAN
(Please draw accurately)

SEE ATTACHED MAP



SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District (District) Well Ordinance 90-1, the District Well Standards, and conditions of this permit (see page 2). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ.

Signature of Property Owner/Agent: Don Ashton	Print/Type Name: DON ASHTON - agent	Date: 3-22-2013
Signature of Client/Agent: Don Ashton	Print/Type Name: DON ASHTON - agent	Date: 3-22-2013
Signature of Driller/Agent: John McAssey	Print/Type Name: John McAssey	Date: 3.22.2013
Signature of Consultant/Agent: Don Ashton	Print/Type Name: DON ASHTON	Date: 3-22-2013

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District Well Inspection Department prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3686
(408) 265-2600

APPLICATION TO DRILL EXPLORATORY BORINGS

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before the exploratory boring is backfilled**. An authorized District representative must be on site to witness the sealing operation. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification under penalty of perjury that the seal was constructed in accordance with the District Well Standards.

B. This permit is valid only for the purpose specified herein. Boring destruction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative finds that site conditions warrant such a change).

C. This permit is only valid for the Assessor's Parcel No. indicated on it.

D. This permit may be voided if it contains incorrect information.

E. Borings shall be sealed within 24 hours following completion of testing or sampling activities. Borings shall not be left in such a condition as to allow for the introduction of surface waters or foreign materials into them. Borings shall be secured such that they do not endanger public health.

F. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2350, 2217, or 2253).

G. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees, free and harmless from any and all expense, cost, and liability in connection with or resulting from the granting or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death.

H. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

I. A current C-57 or C-61 Contractor's License is required for work associated with this permit.

J. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials or waters generated during drilling, boring destruction, and/or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statues regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where the work is being completed.

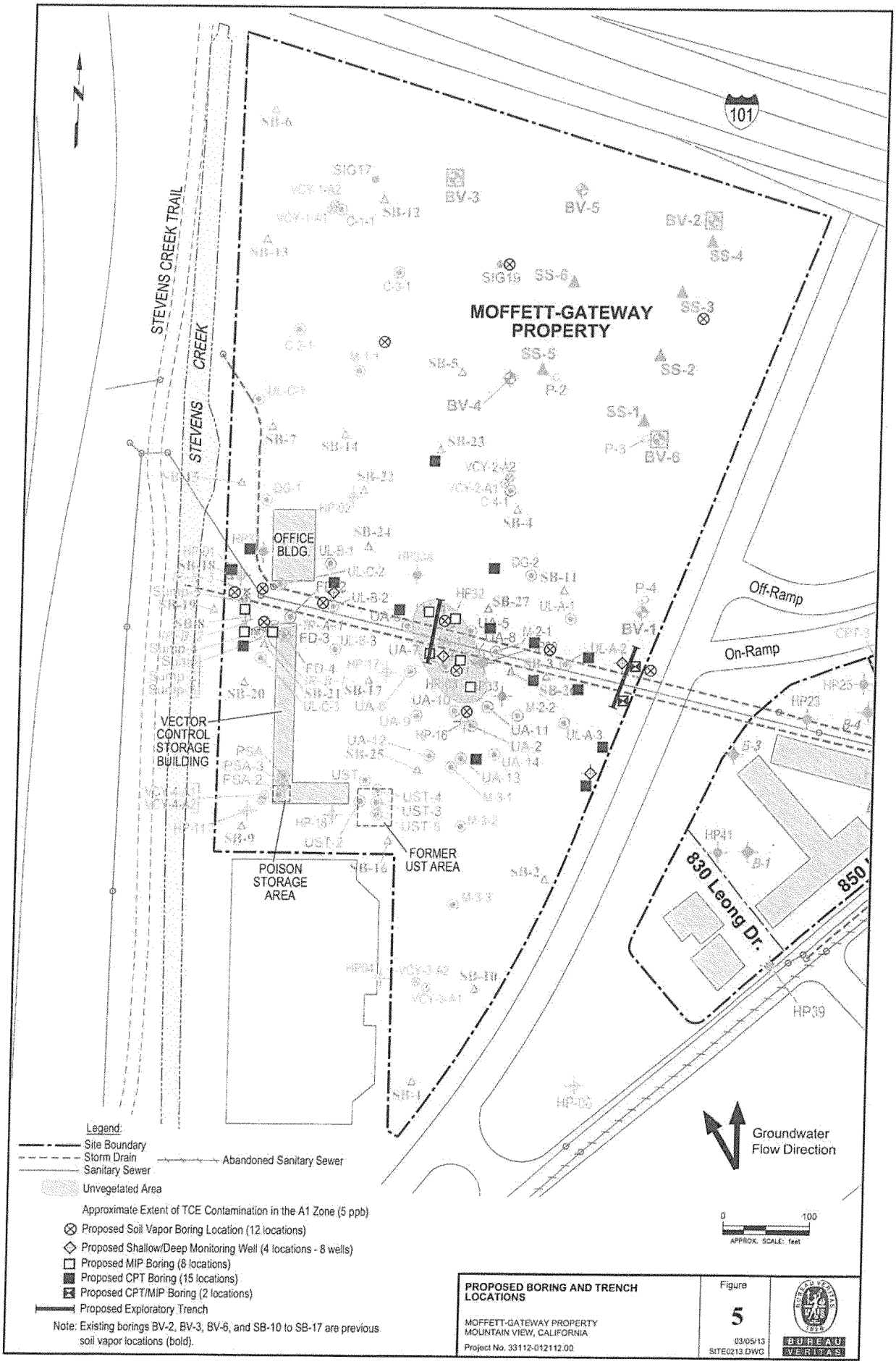
K. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with District.

L. This permit shall expire if not exercised within 180 calendar days of its approval, unless an extension of the permit expiration date is granted by an authorized District representative.

M. This permit shall be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

Permit Approved by:	Date:

Please allow 10 working days to process this application.



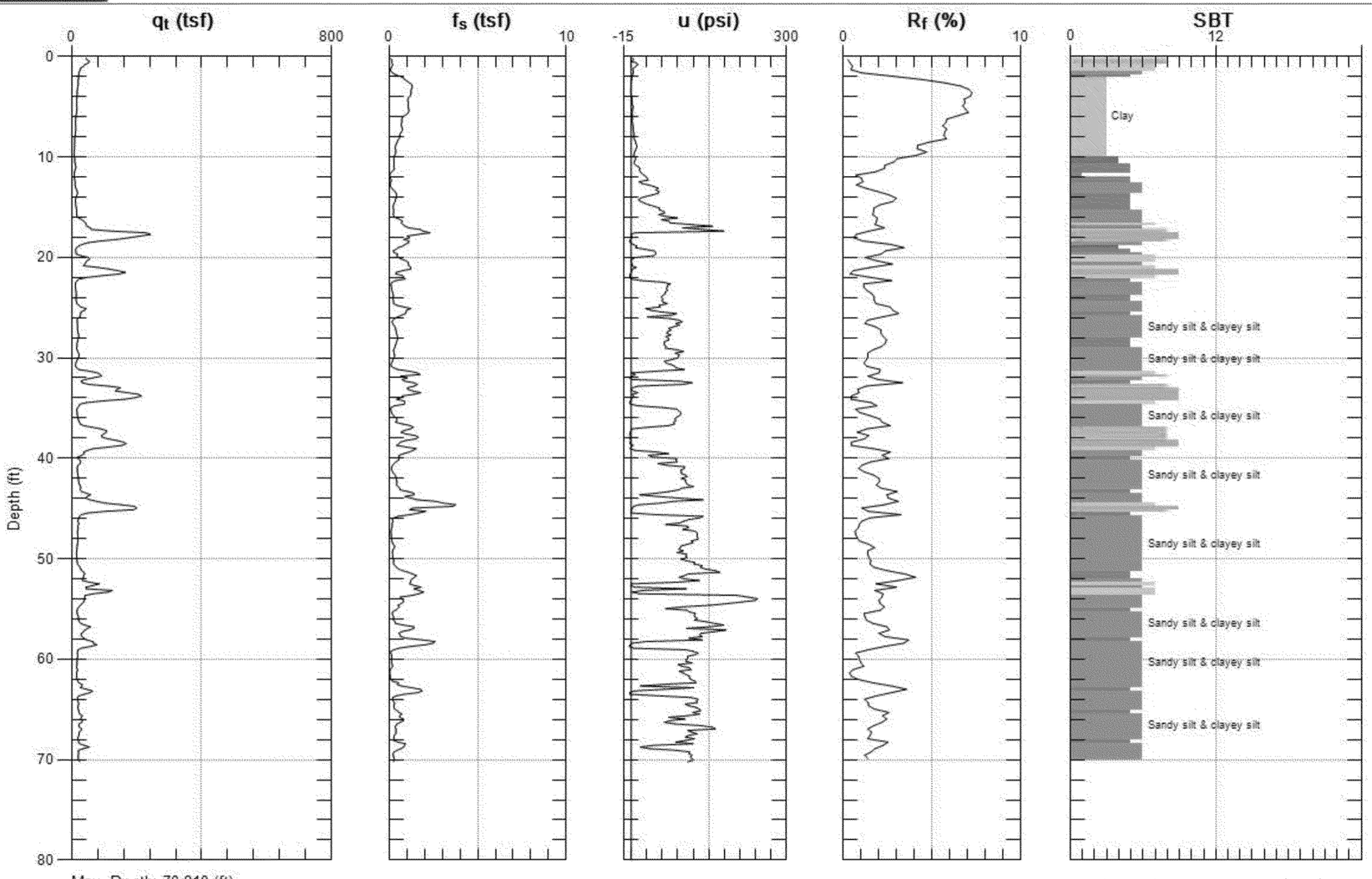
APPENDIX B

CPT LOGS

BUREAU VERITS

Site: MOFFETT GATEWAY PRO Engineer: J.WERFAL

Sounding: BV-C1 Date: 4/30/2013 12:53



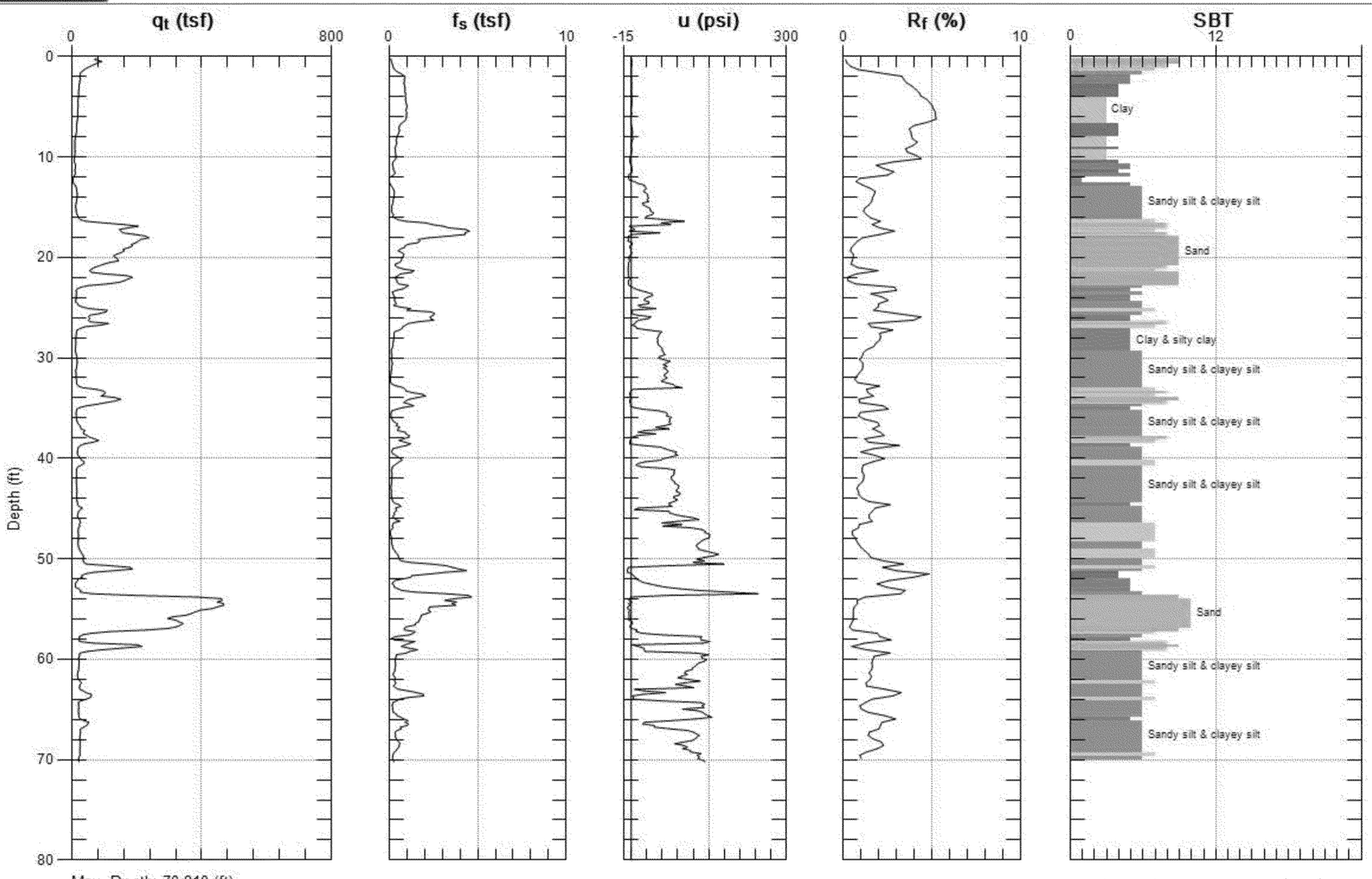
Max. Depth: 70.210 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

BUREAU VERITS

Site: MOFFETT GATEWAY PRO Engineer: J.WERFAL

Sounding: BV-C2 Date: 4/30/2013 11:31



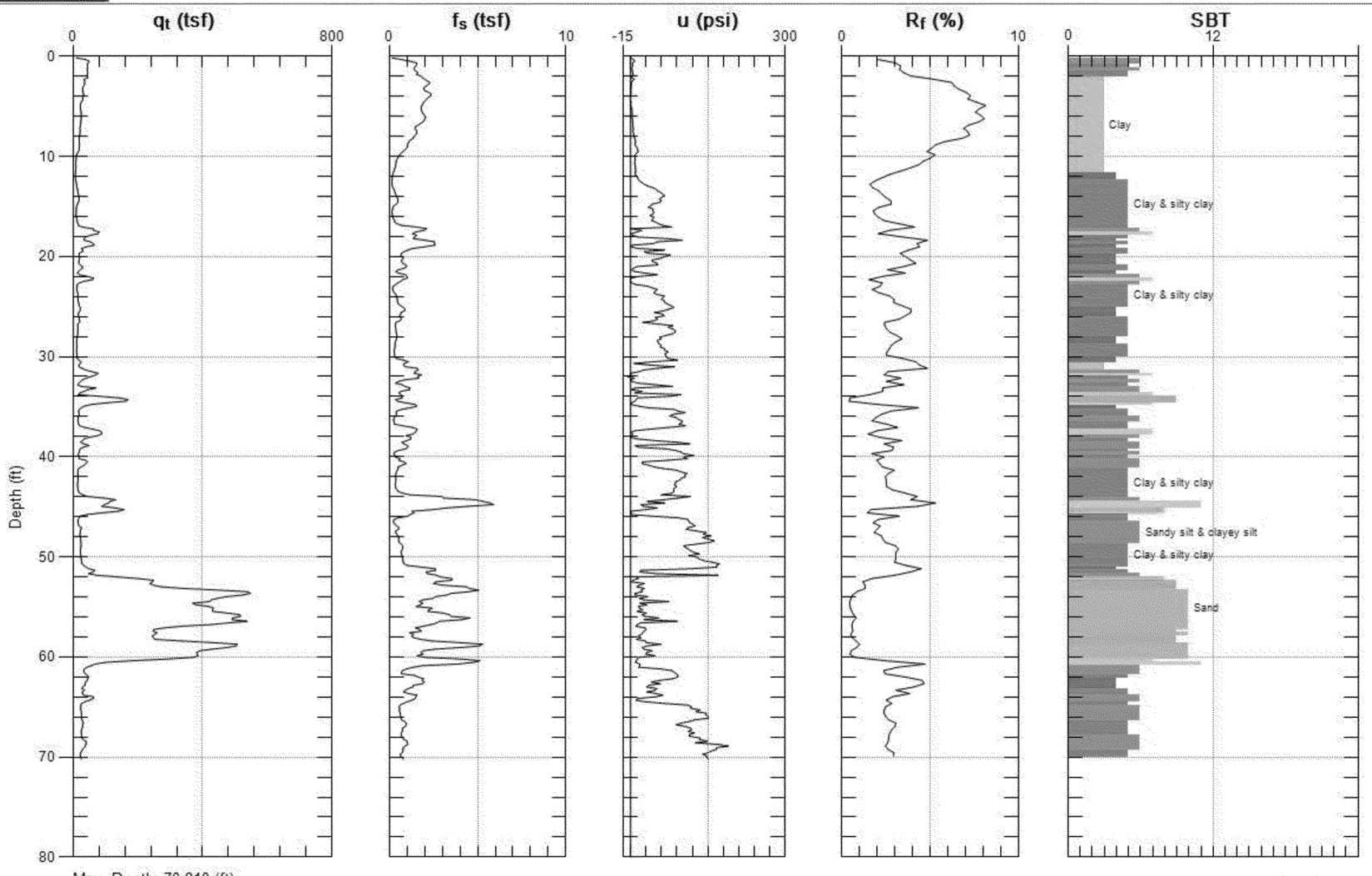
Max. Depth: 70.210 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

BUREAU VERITS

Site: MOFFETT GATEWAY PRO Engineer: J.WERFAL

Sounding: BV-C5 Date: 4/30/2013 09:32



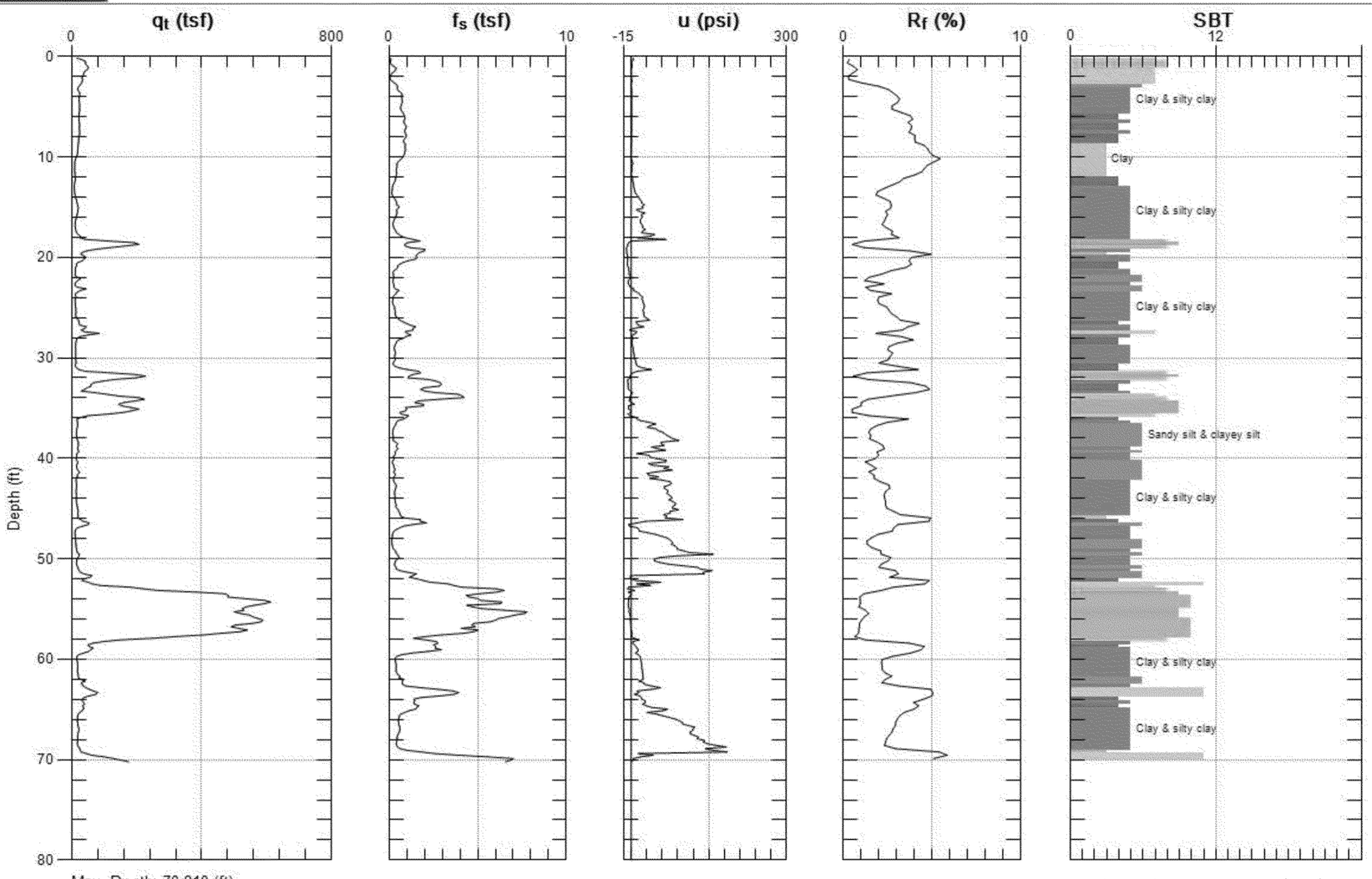
Max. Depth: 70.210 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

BUREAU VERITS

Site: MOFFETT GATEWAY PRO Engineer: J.WERFAL

Sounding: BV-C6 Date: 4/30/2013 07:35



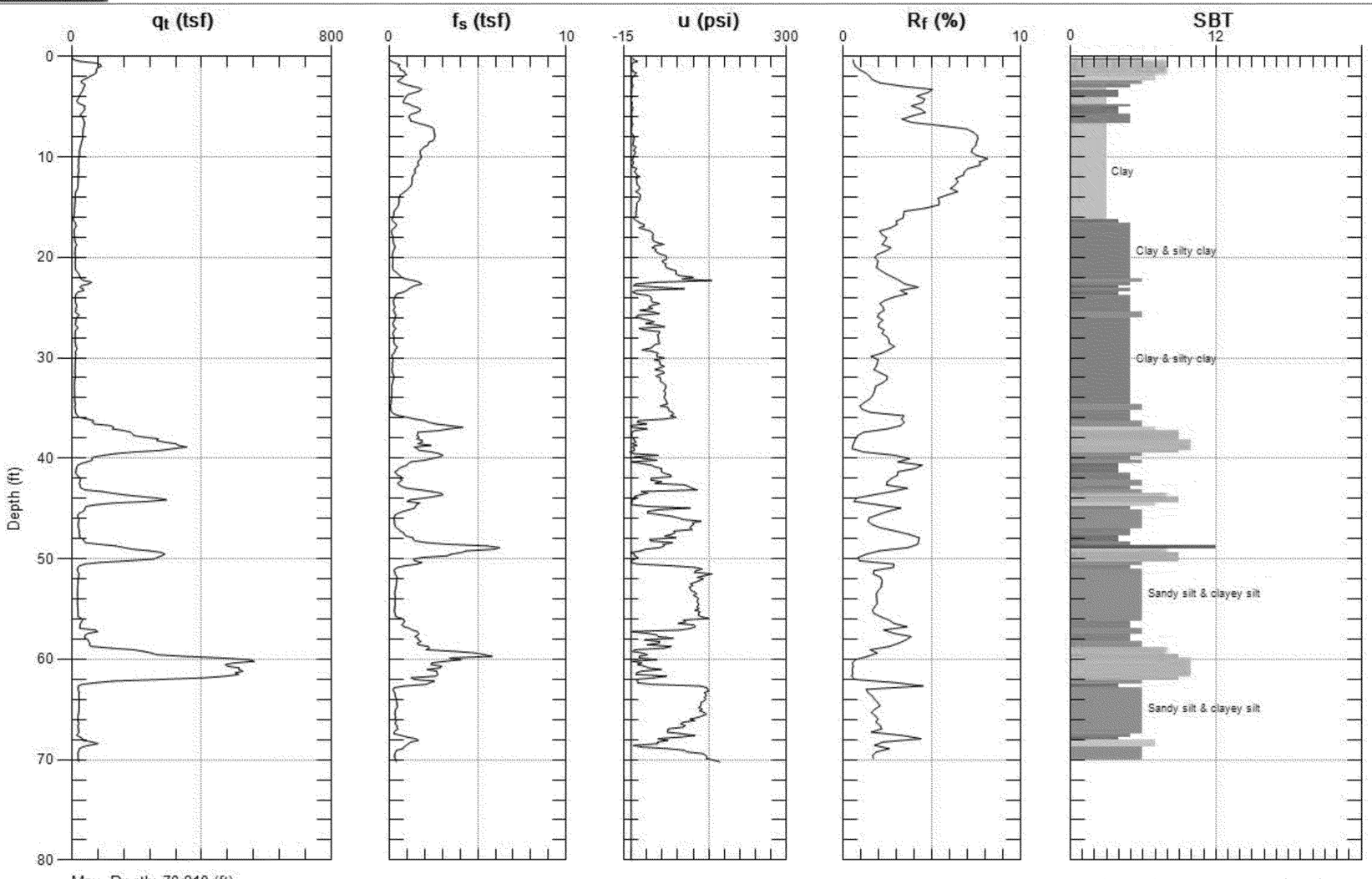
Max. Depth: 70.210 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

BUREAU VERITS

Site: MOFFETT GATEWAY PRO Engineer: J.WERFAL

Sounding: BV-C7 Date: 4/29/2013 09:44



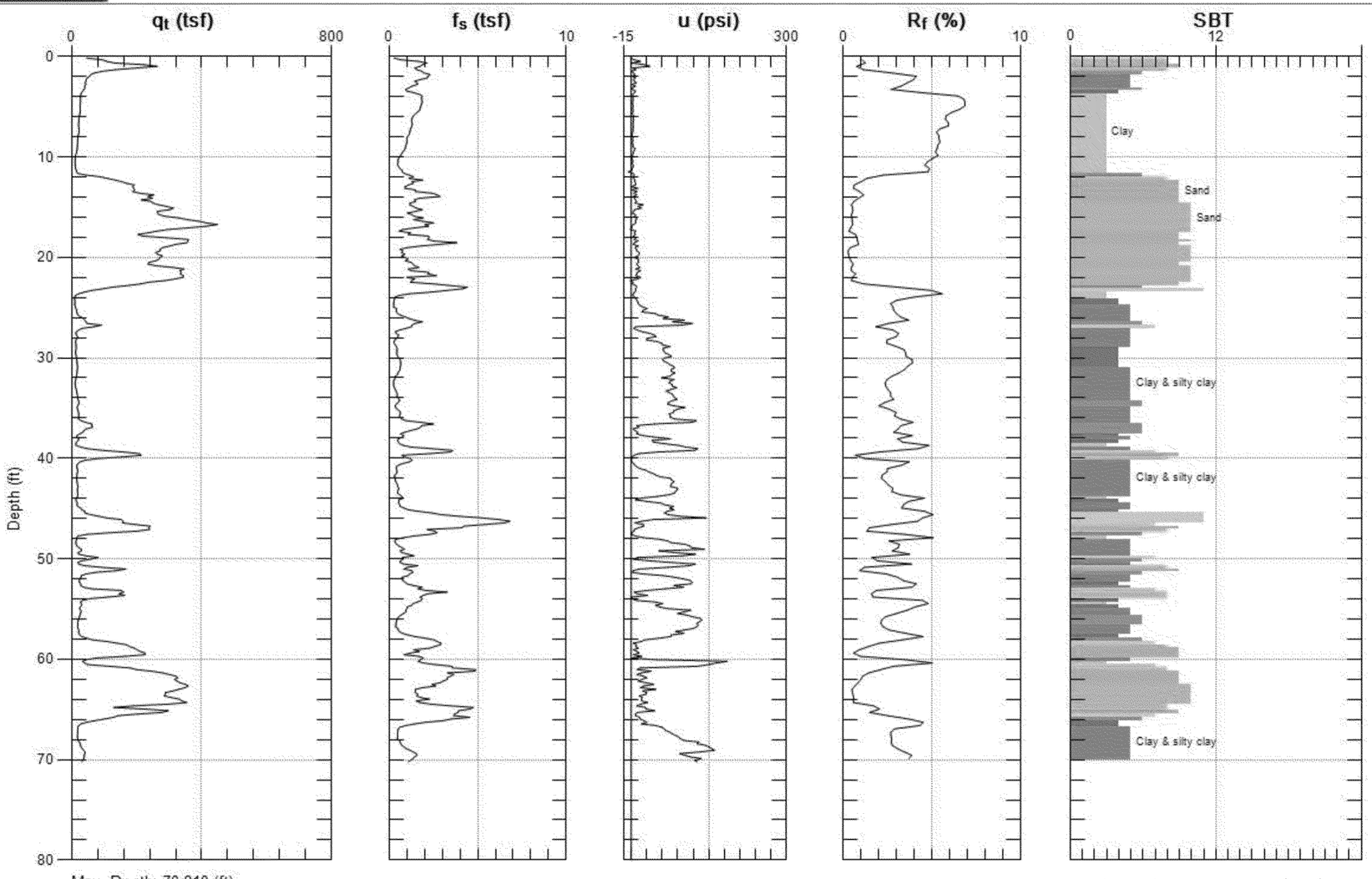
Max. Depth: 70.210 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

BUREAU VERITS

Site: MOFFETT GATEWAY PRO Engineer: J.WERFAL

Sounding: BV-C8 Date: 4/29/2013 07:46



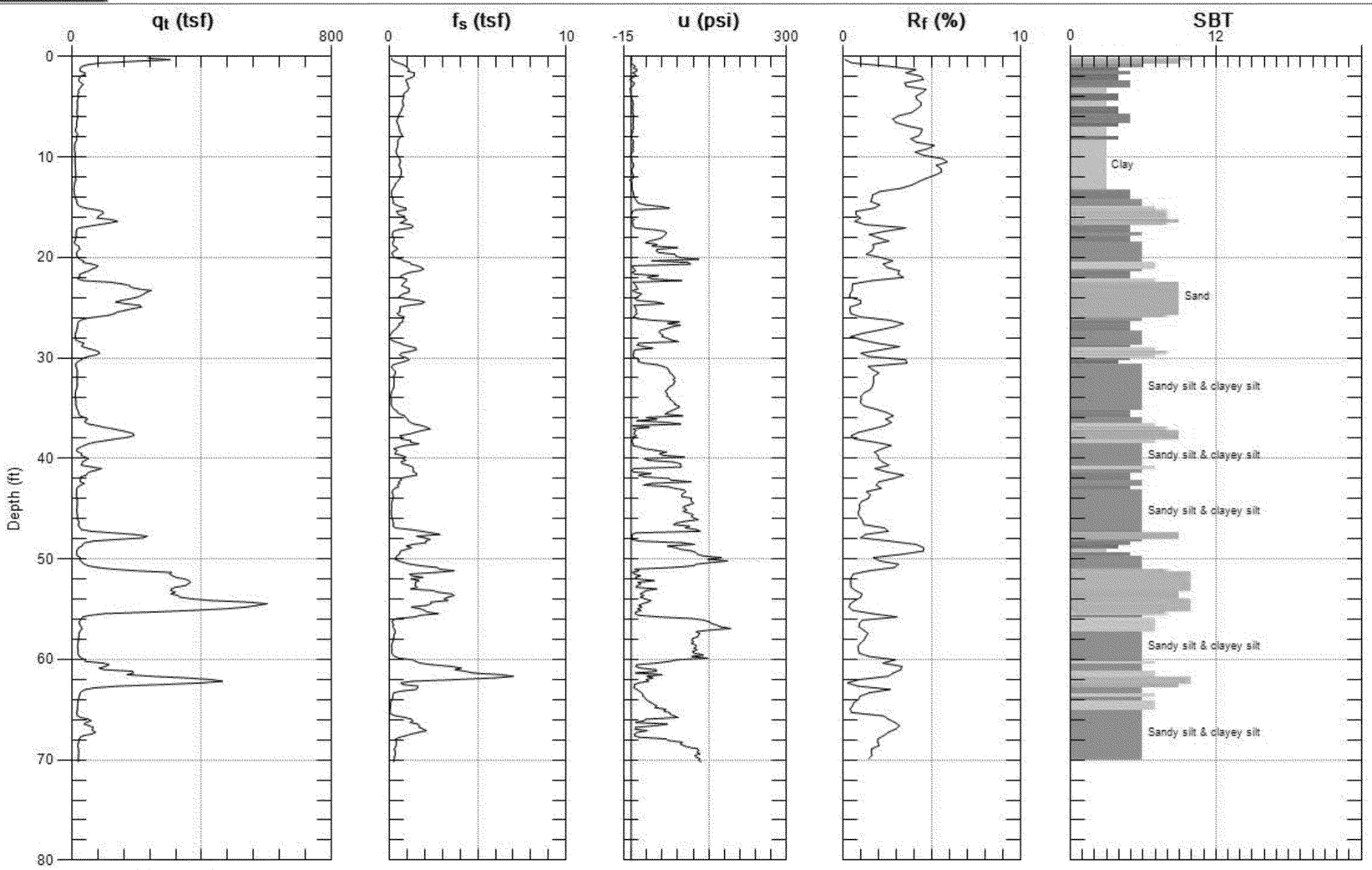
Max. Depth: 70.210 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

BUREAU VERITS

Site: MOFFETT GATEWAY PRO Engineer: J.WERFAL

Sounding: BV-C9 Date: 5/1/2013 07:28



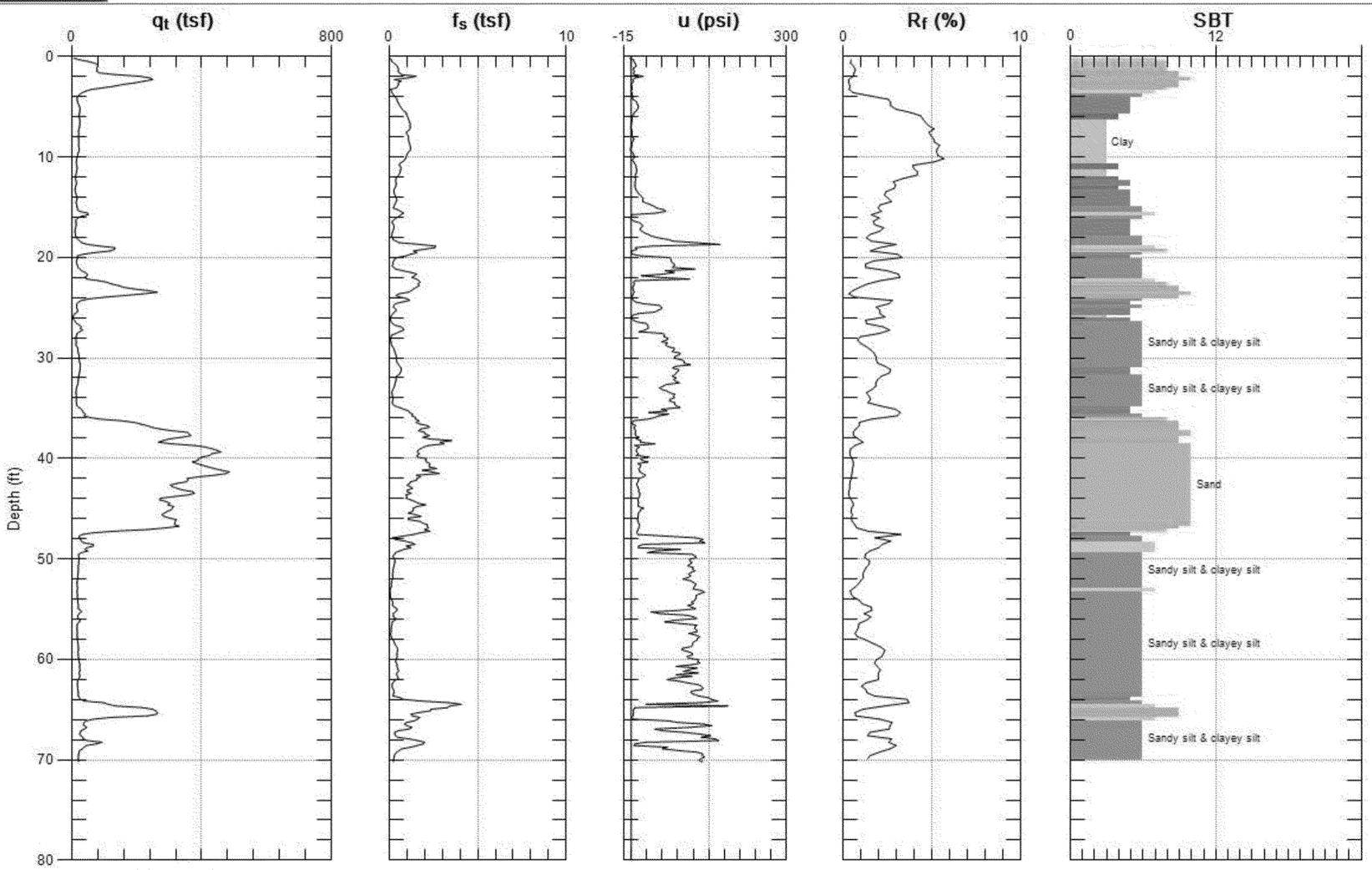
Max. Depth: 70.210 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

BUREAU VERITS

Site: MOFFETT GATEWAY PRO Engineer: J.WERFAL

Sounding: BV-C10 Date: 5/1/2013 09:12



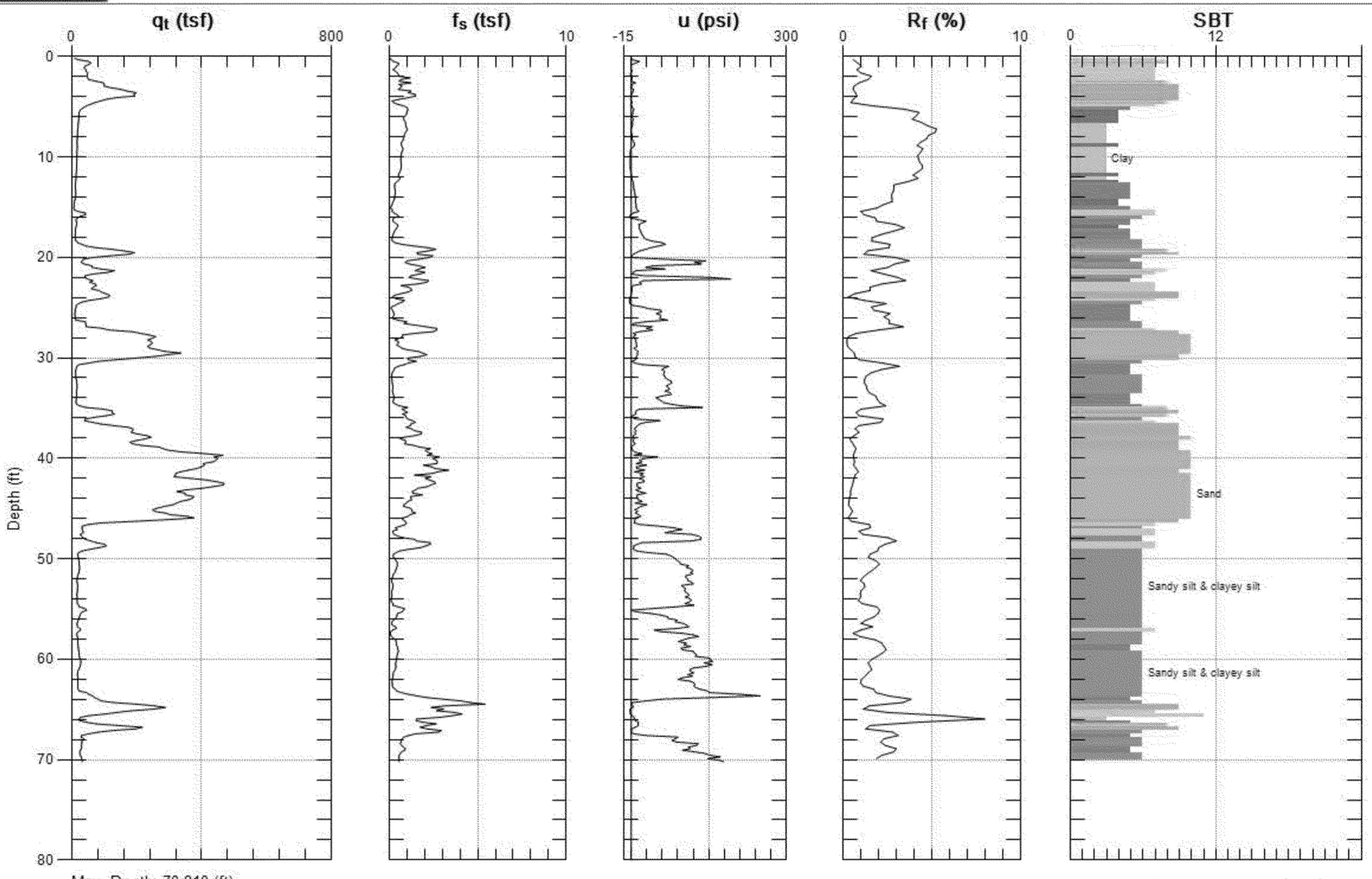
Max. Depth: 70.210 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

BUREAU VERITS

Site: MOFFETT GATEWAY PRO Engineer: J.WERFAL

Sounding: BV-C11 Date: 5/1/2013 10:53



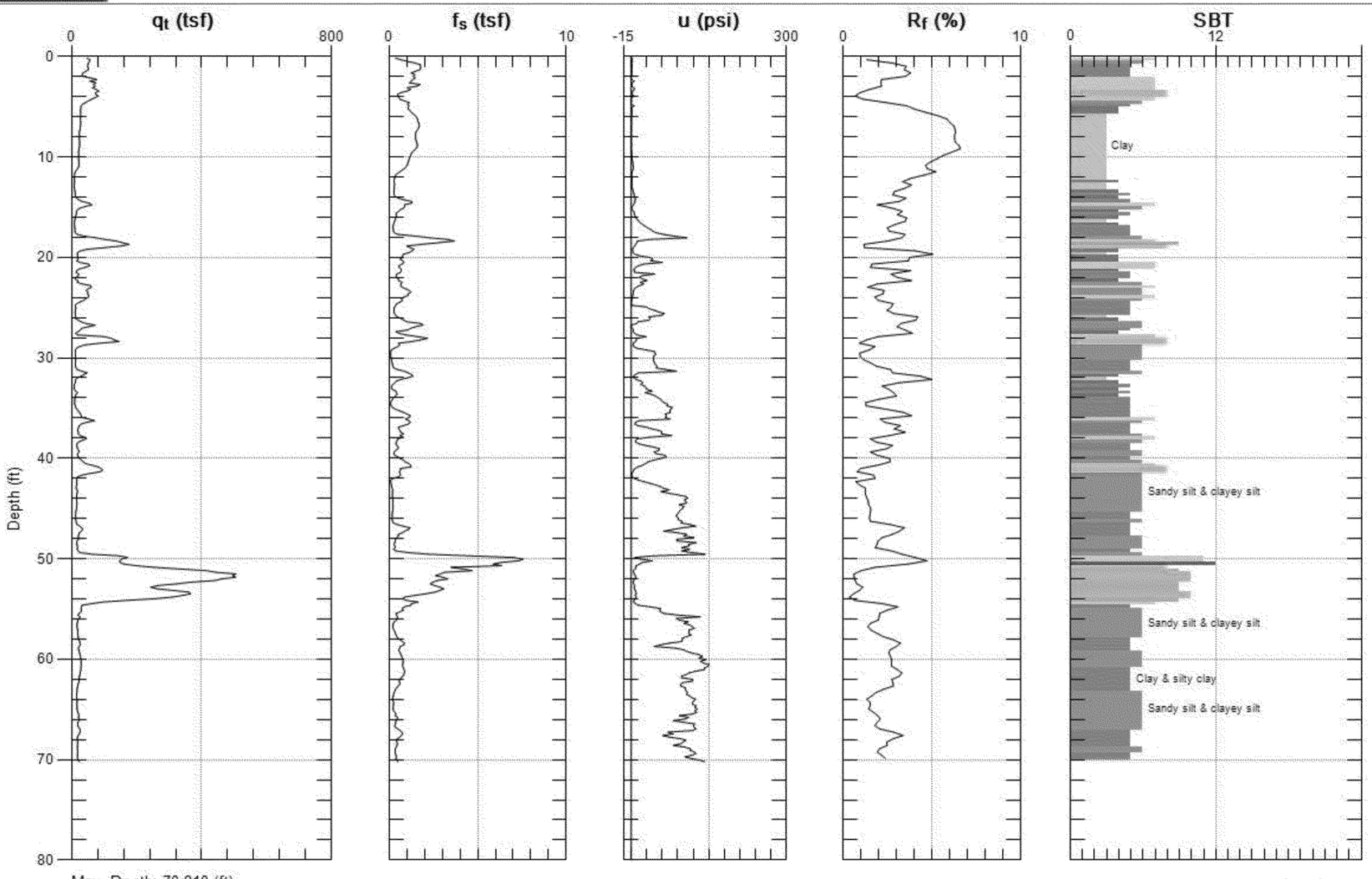
Max. Depth: 70.210 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

BUREAU VERITS

Site: MOFFETT GATEWAY PRO Engineer: J.WERFAL

Sounding: BV-C12 Date: 5/3/2013 10:46



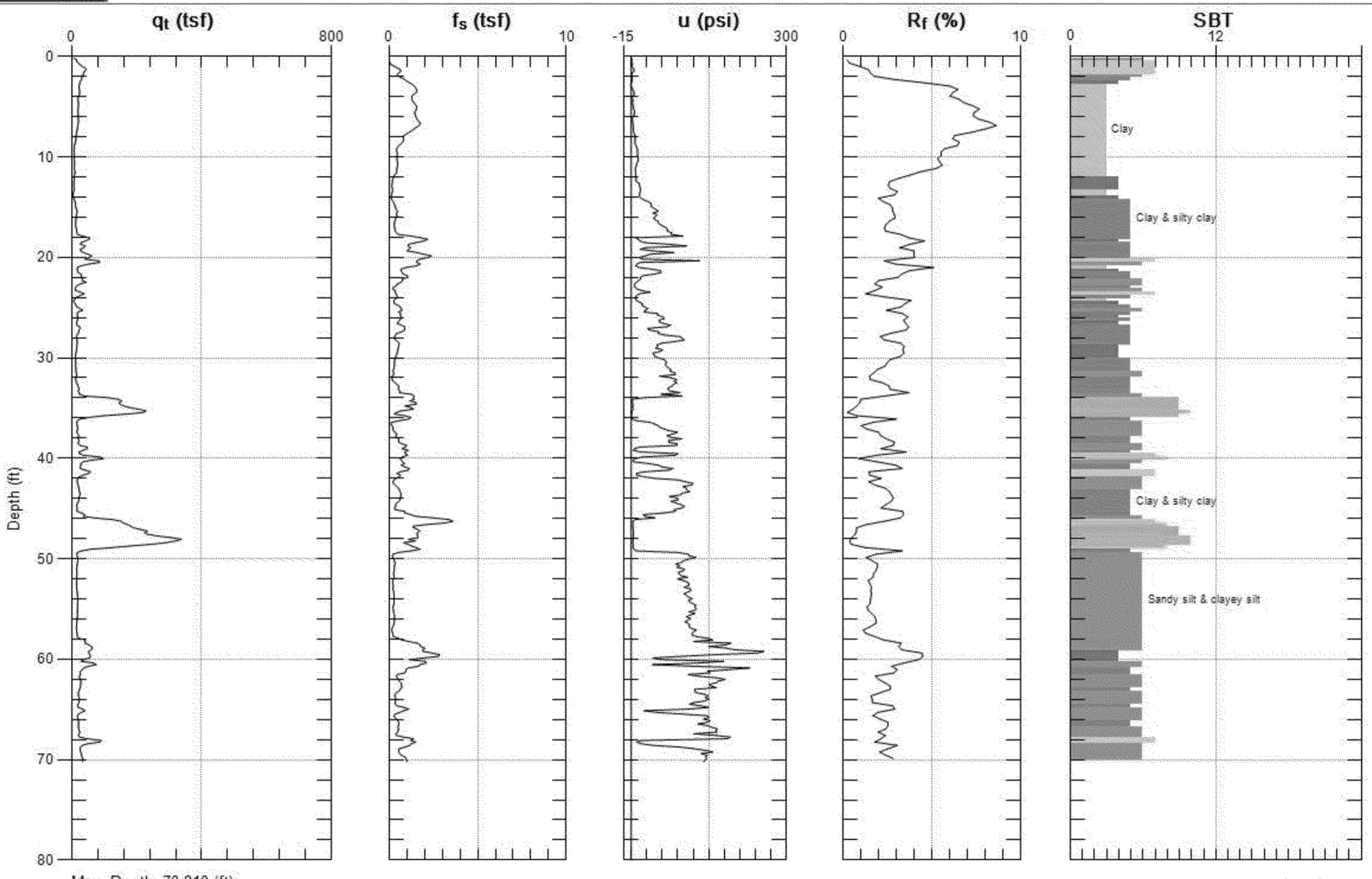
Max. Depth: 70.210 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

BUREAU VERITS

Site: MOFFETT GATEWAY PRO Engineer: J.WERFAL

Sounding: BV-C13 Date: 5/3/2013 09:14



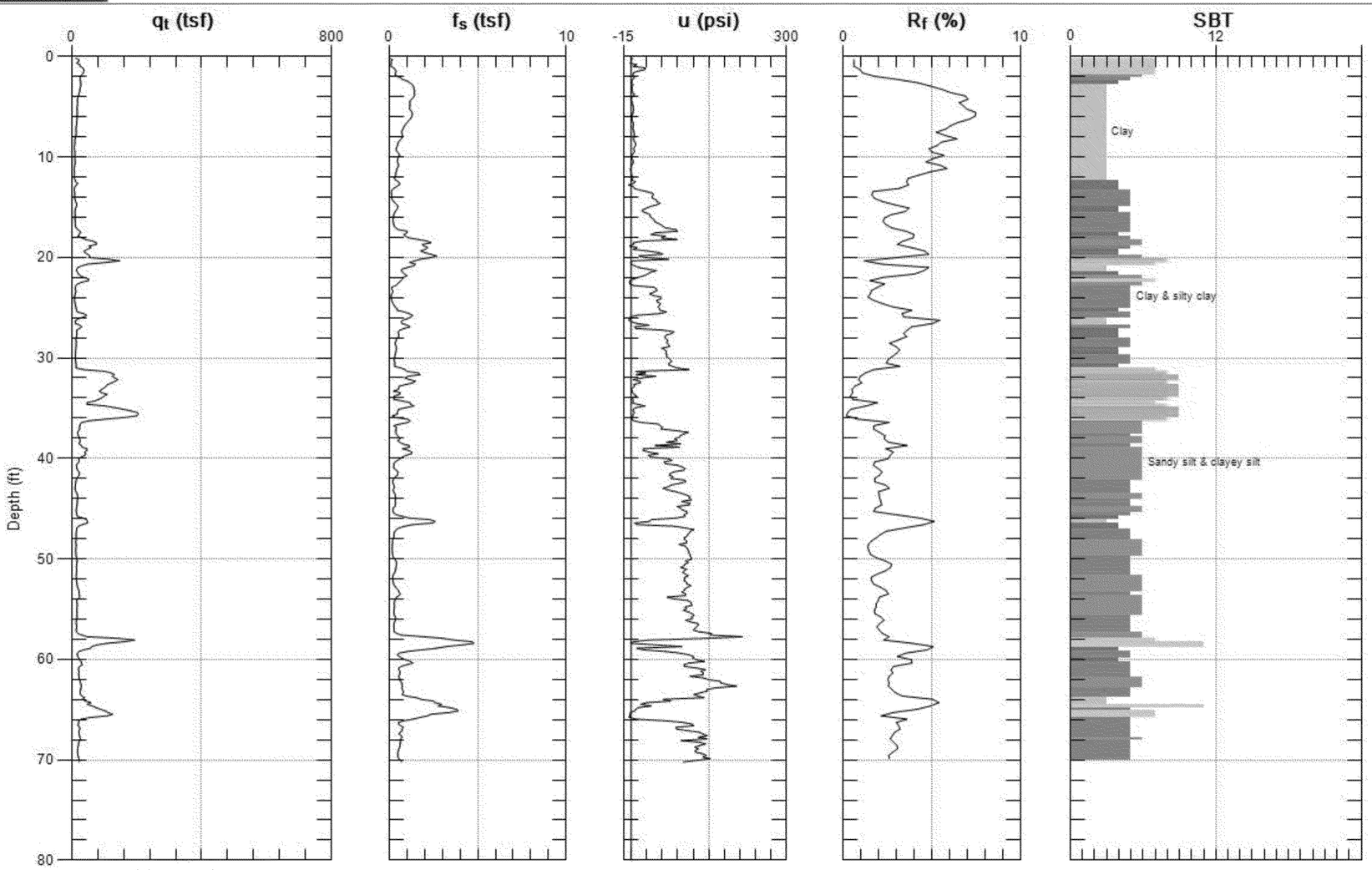
Max. Depth: 70.210 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

BUREAU VERITS

Site: MOFFETT GATEWAY PRO Engineer: J.WERFAL

Sounding: BV-C14 Date: 4/29/2013 12:41



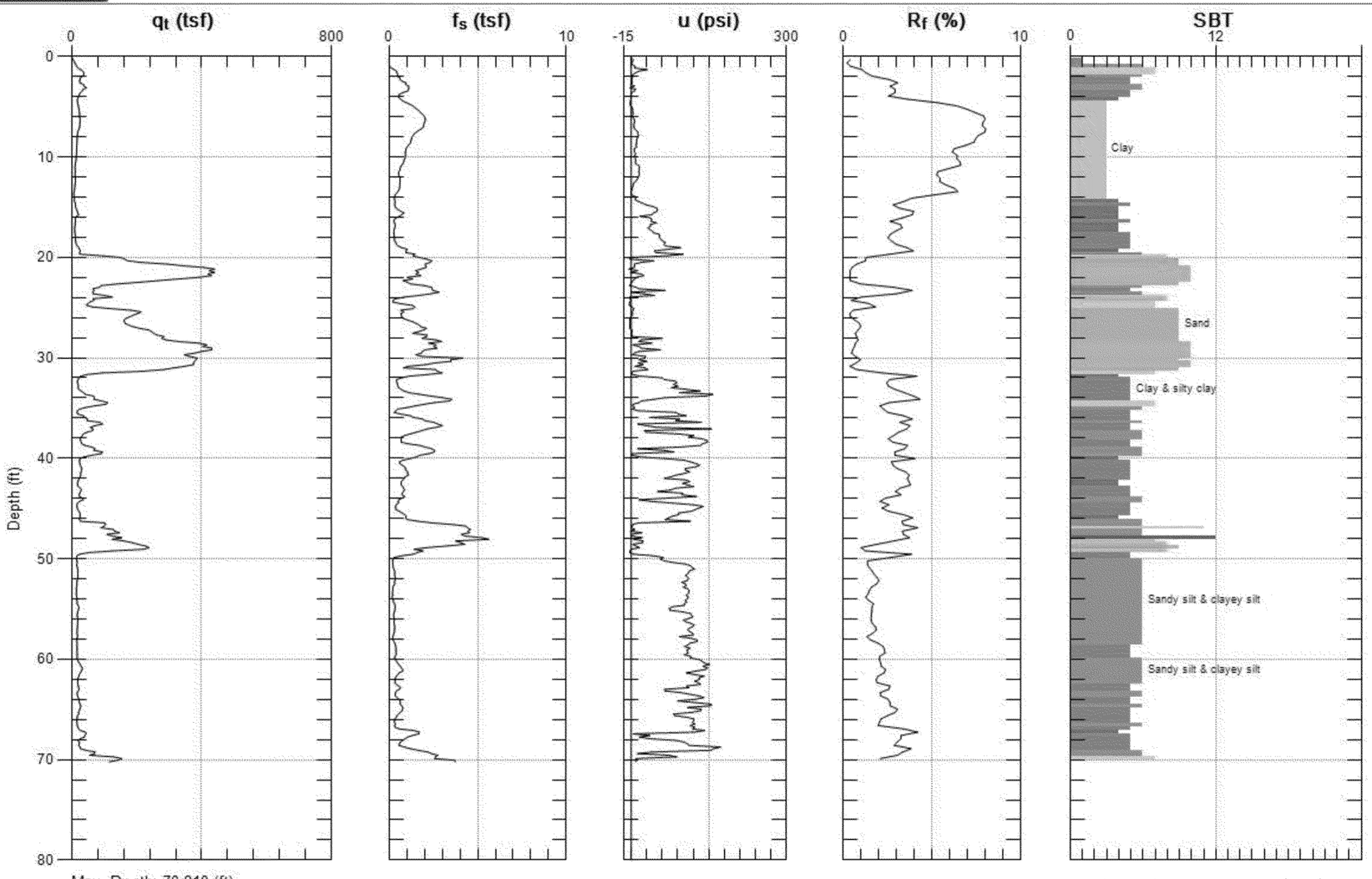
Max. Depth: 70.210 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

BUREAU VERITS

Site: MOFFETT GATEWAY PRO Engineer: J.WERFAL

Sounding: BV-C15 Date: 4/29/2013 11:13



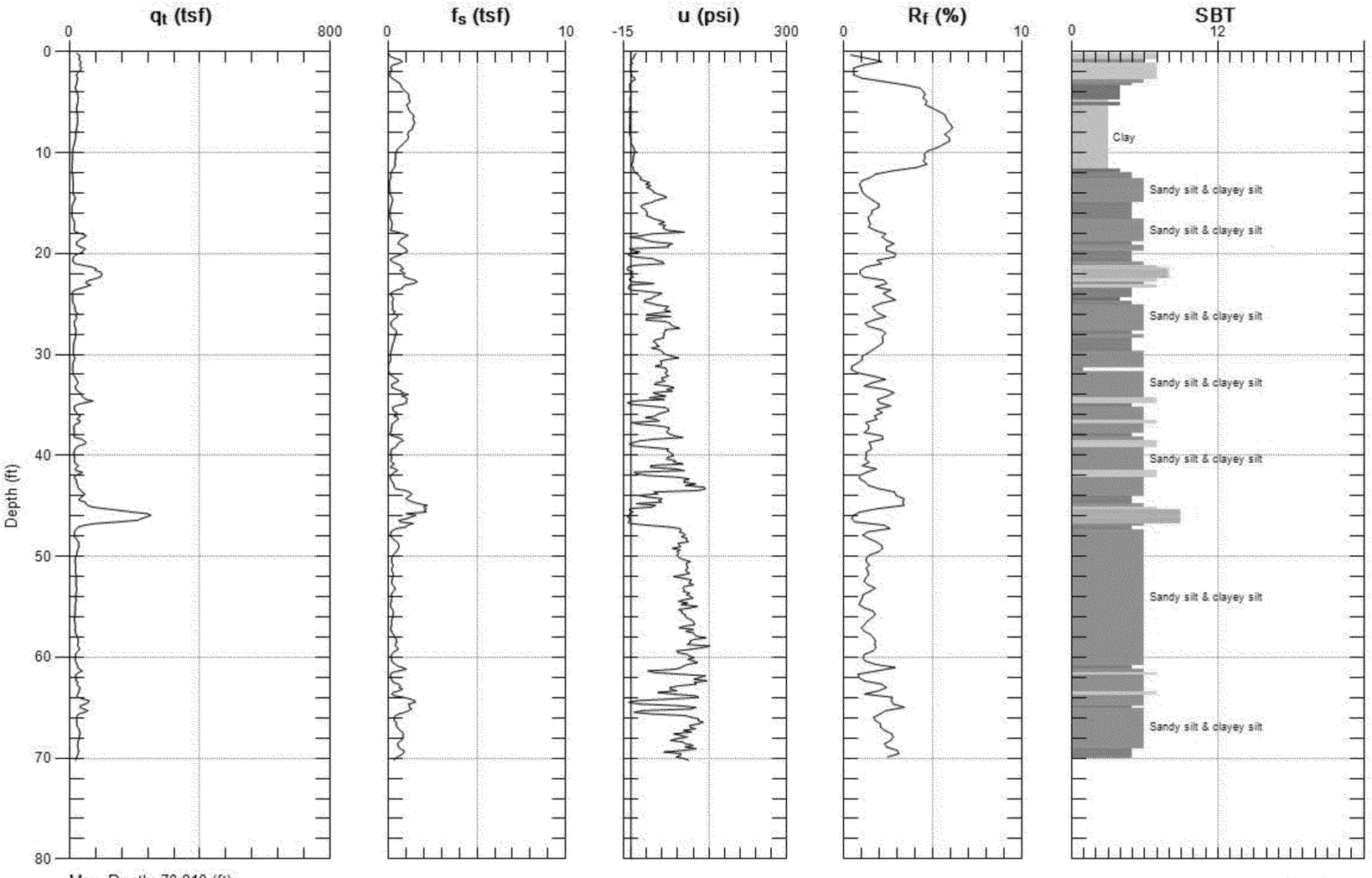
Max. Depth: 70.210 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

BUREAU VERITS

Site: MOFFETT GATEWAY PRO Engineer: J.WERFAL

Sounding: BV-C16 Date: 5/1/2013 12:39



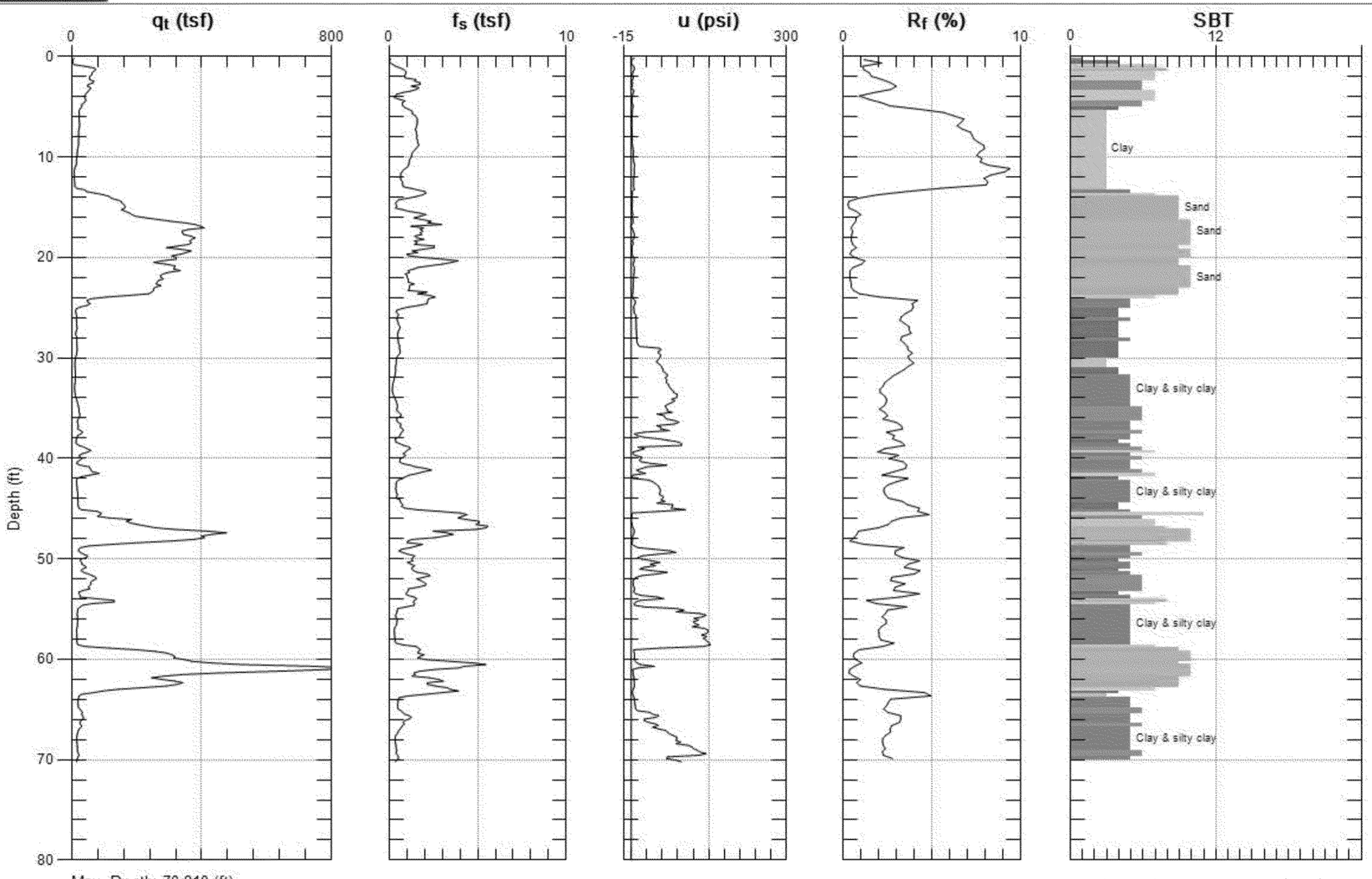
Max. Depth: 70.210 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

BUREAU VERITS

Site: MOFFETT GATEWAY PRO Engineer: J.WERFAL

Sounding: BV-C17 Date: 5/3/2013 07:36



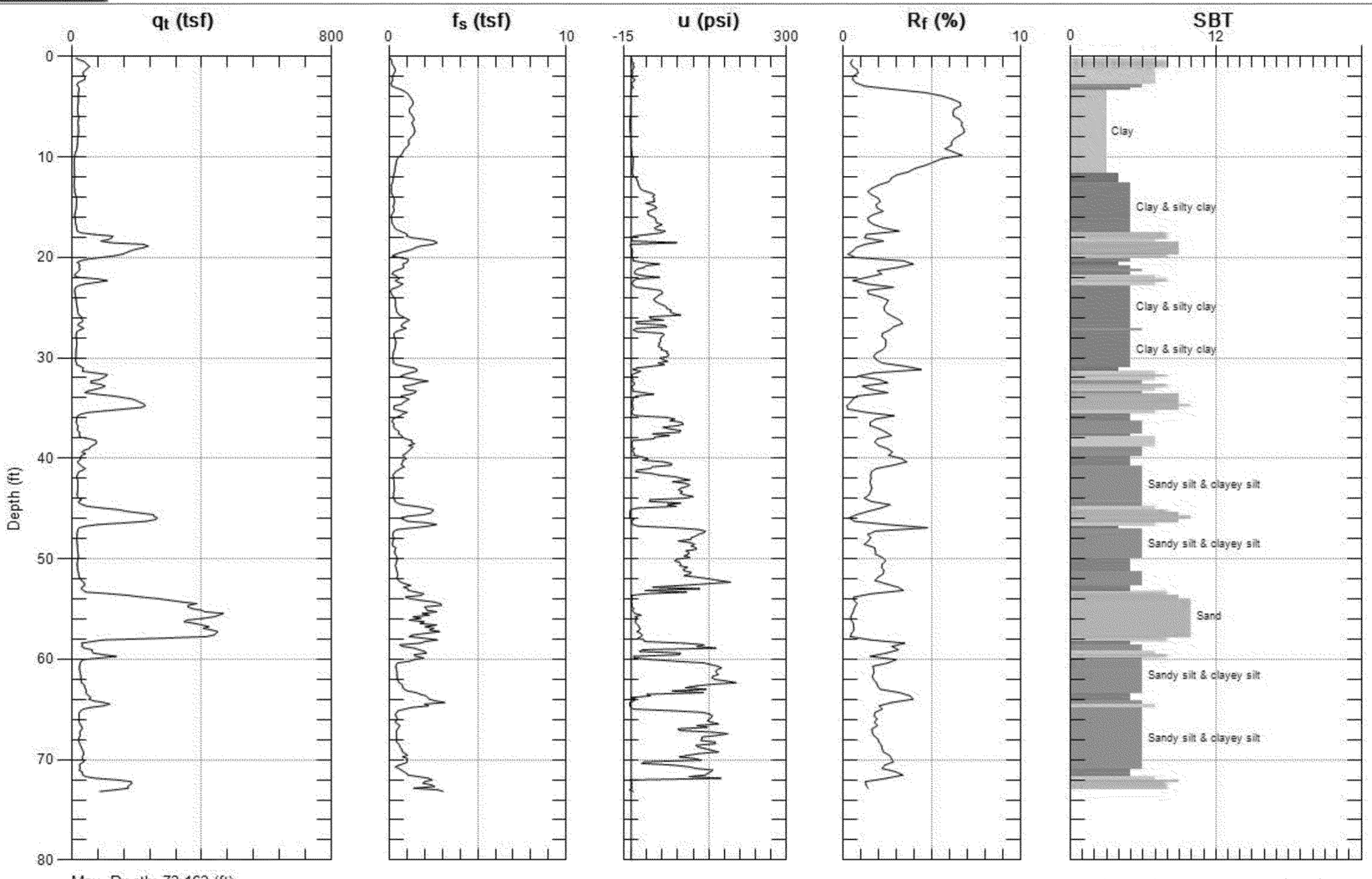
Max. Depth: 70.210 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

BUREAU VERITS

Site: MOFFETT GATEWAY PRO Engineer: J.WERFAL

Sounding: BV-CM3 Date: 5/2/2013 08:52



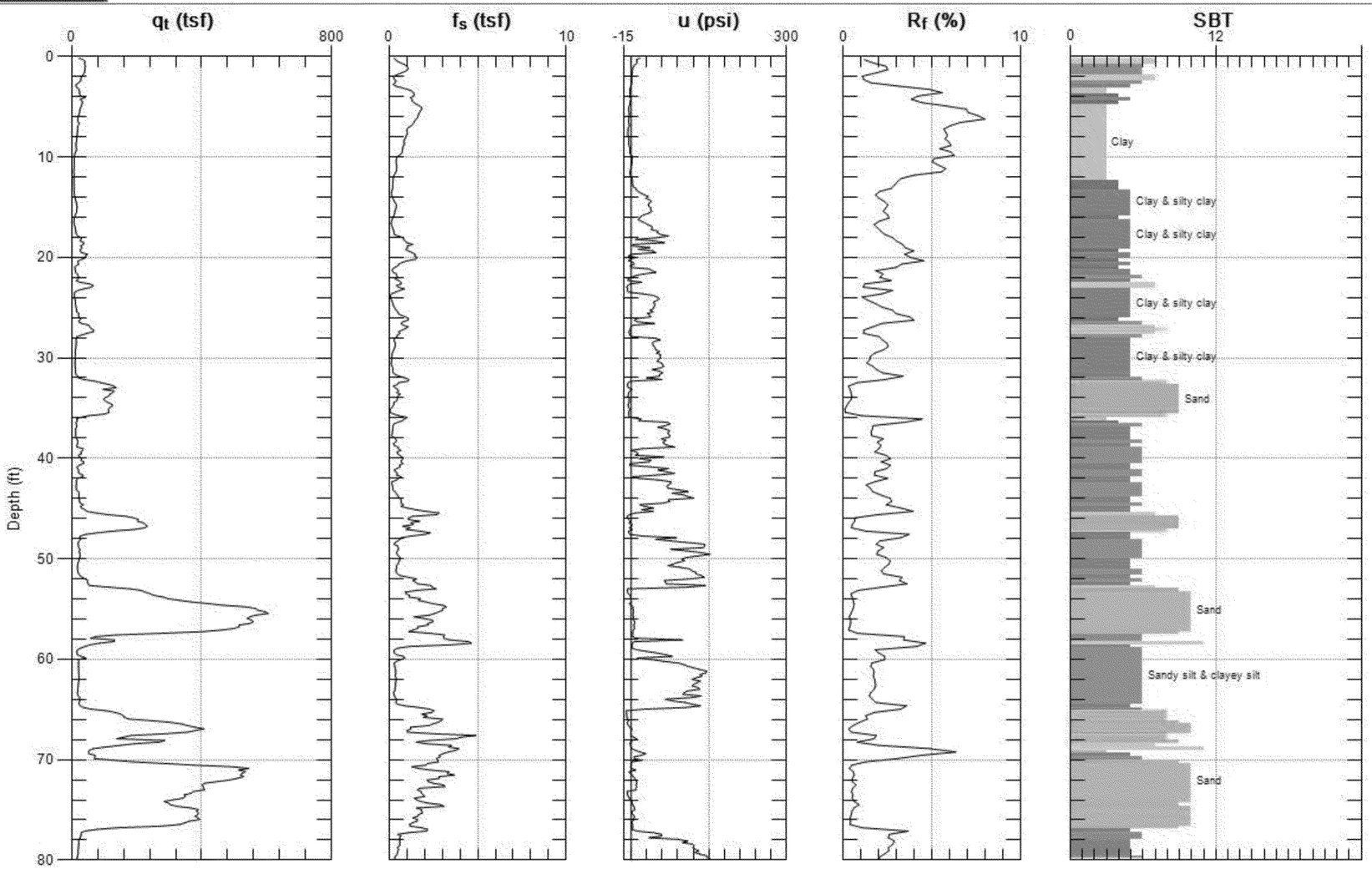
Max. Depth: 73.163 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

BUREAU VERITS

Site: MOFFETT GATEWAY PRO Engineer: J.WERFAL

Sounding: BV-CM4 Date: 5/2/2013 12:05



Max. Depth: 83.169 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

APPENDIX C

MIP LOGS

VIRONEX
1641 Challenge Drive
Concord, CA 94520
P: 925-849-6970
F: 925-849-6973
www.vironex.com

Boring Name : BV-CM3

Total Depth : 70.20
GW Depth (ft) : 9.00
Depth of GW Provided by Client.
Blue line on each graph denotes depth of GW.

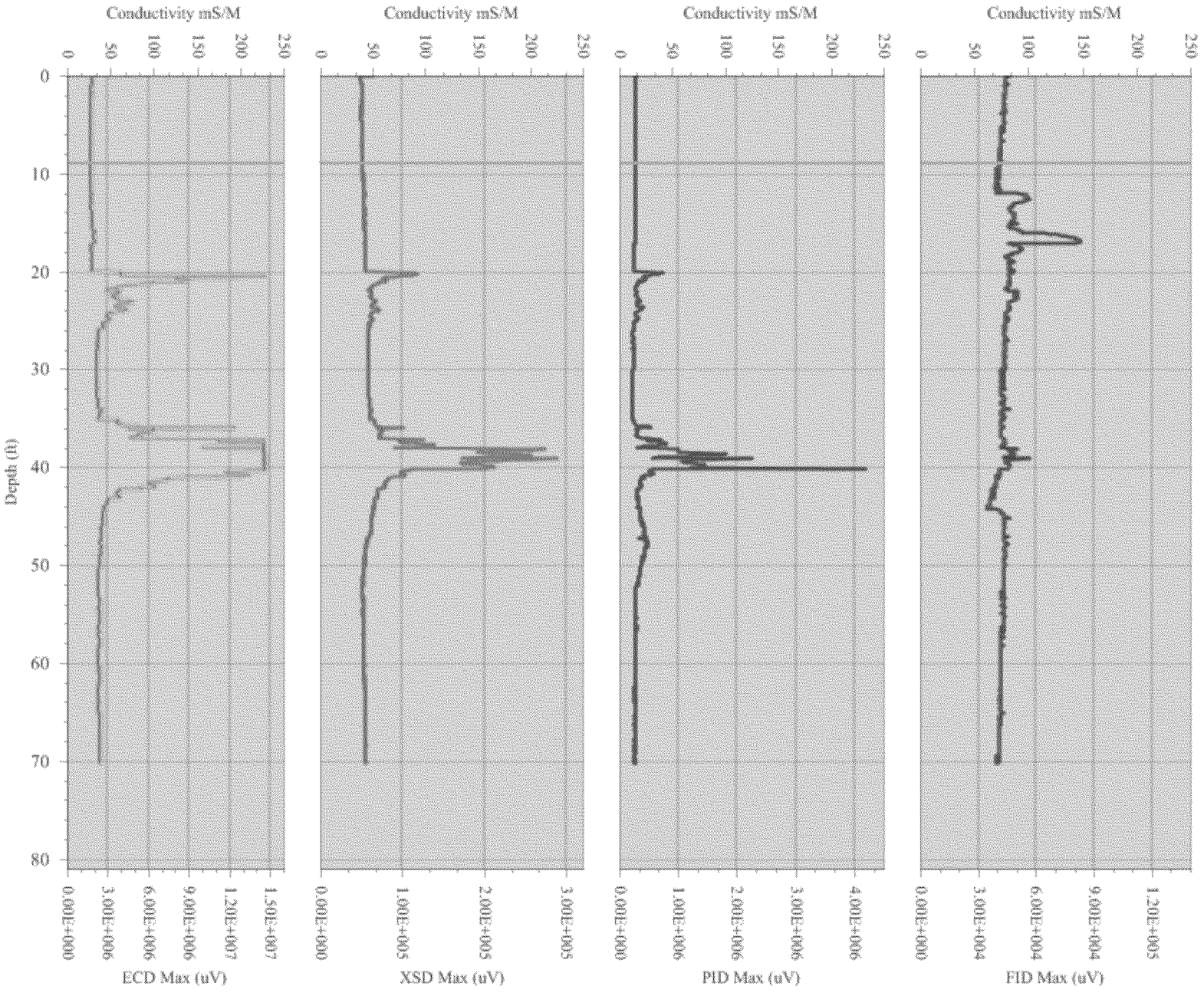
None.

Project Information

Client Company :	Bureau Veritas	Trunkline Length :	200
Project Name :	Moffett-Gateway, Former Vector Control Yard	Probe Type :	6520/Heater Block
Site Address :	750 Moffett Boulevard, Mountain View, CA	Rig Type :	CPT/Heater Block

Boring Information

Start Boring Time:	May 02 2013 08:53:45
End Boring Time :	May 02 2013 10:18:18
MIP Specialist :	Jeff Paul



VIRONEX
1641 Challenge Drive
Concord, CA 94520
P: 925-849-6970
F: 925-849-6973
www.vironex.com

Boring Name : BV-CM4

Total Depth : 80.30
GW Depth (ft) : 9.00
Depth of GW Provided by Client.
Blue line on each graph denotes depth of GW.

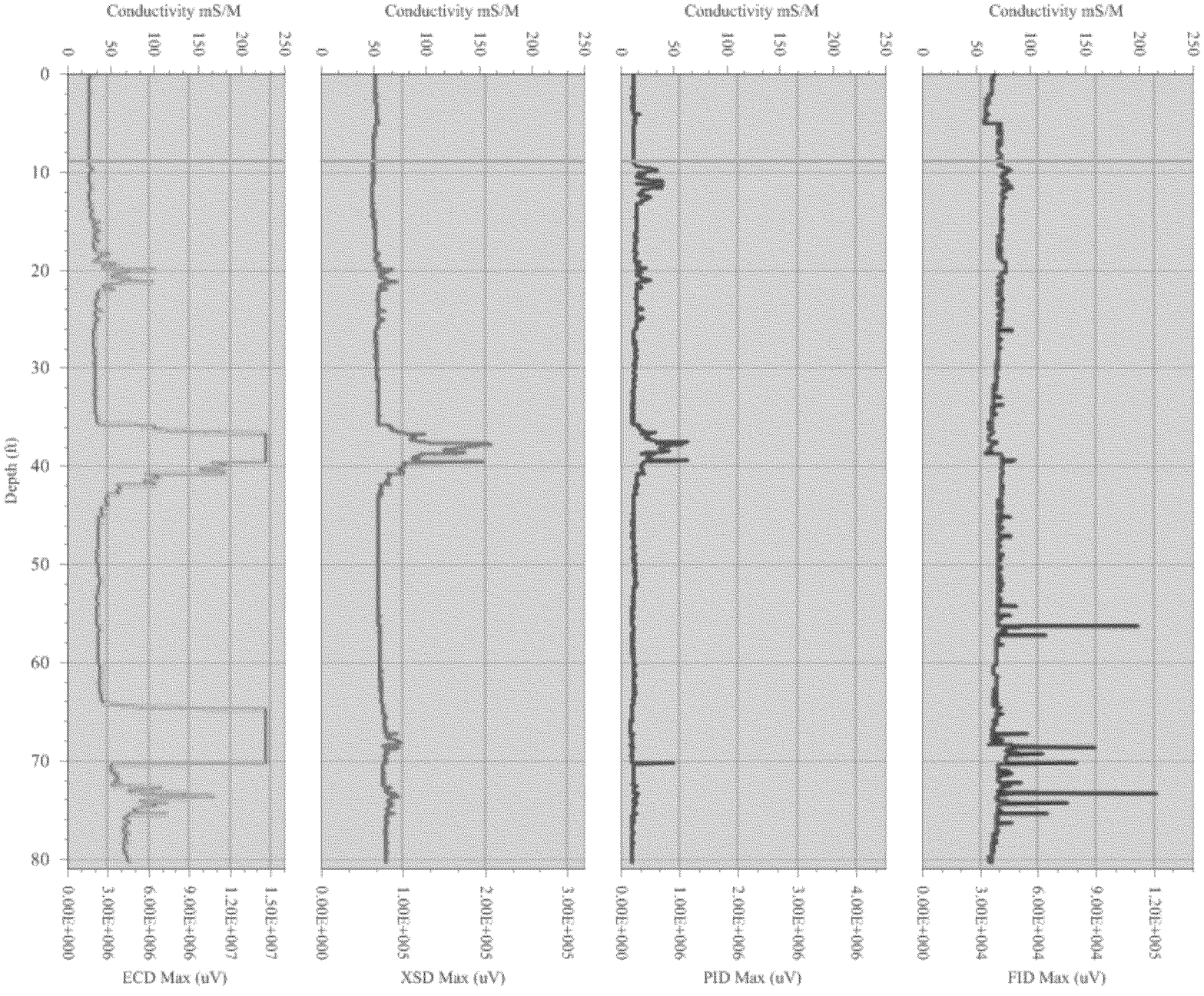
None.

Project Information

Client Company :	Bureau Veritas	Trunkline Length :	200
Project Name :	Moffett-Gateway, Former Vector Control Yard	Probe Type :	6520/Heater Block
Site Address :	750 Moffett Boulevard, Mountain View, CA	Rig Type :	CPT/Heater Block

Boring Information

Start Boring Time:	May 02 2013 12:07:49
End Boring Time :	May 02 2013 14:08:01
MIP Specialist :	Jeff Paul



VIRONEX
1641 Challenge Drive
Concord, CA 94520
P: 925-849-6970
F: 925-849-6973
www.vironex.com

Boring Name : BV-M18

Total Depth : 70.90
GW Depth (ft) : 9.00
Depth of GW Provided by Client.
Blue line on each graph denotes depth of GW.

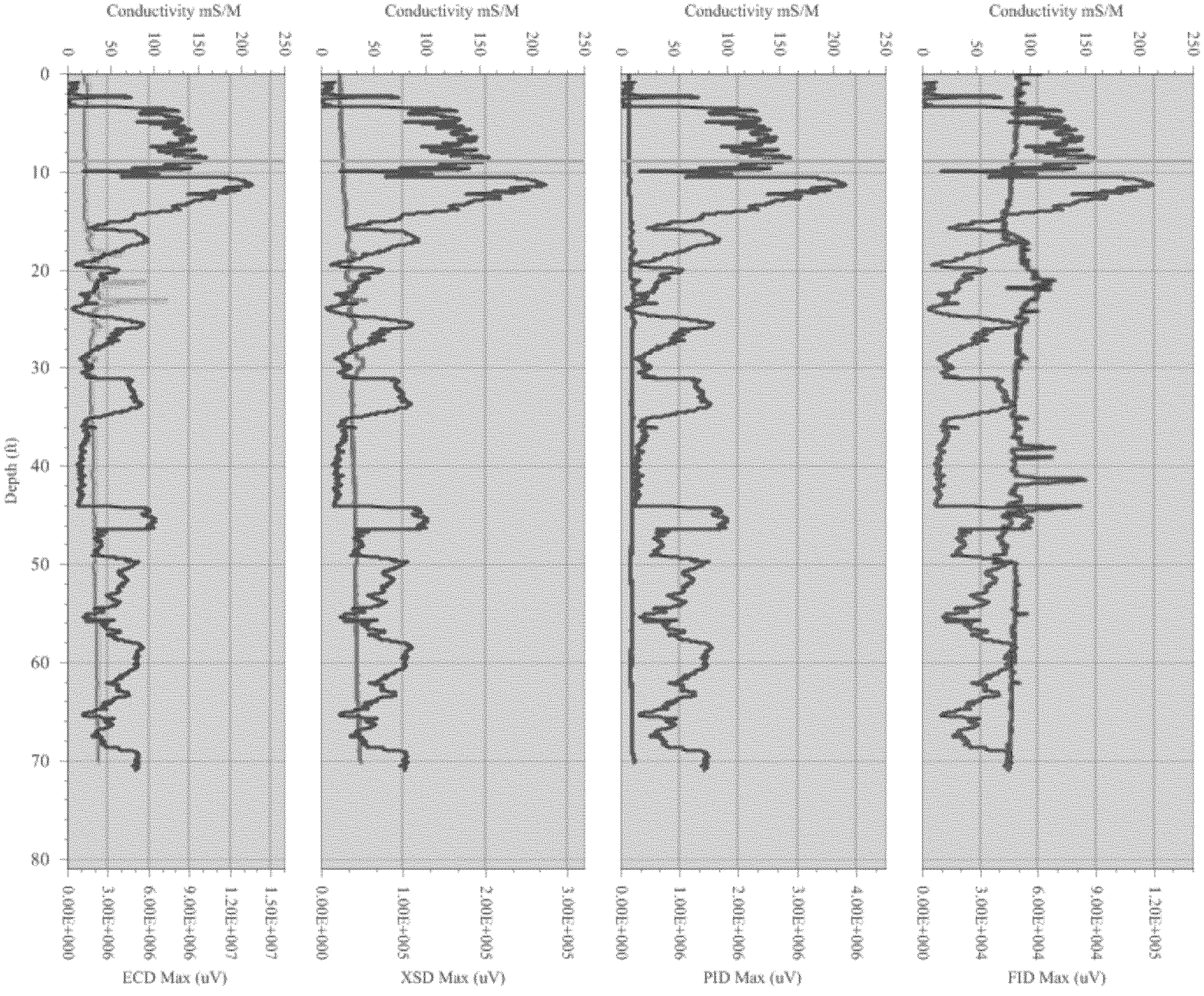
None.

Project Information

Client Company :	Bureau Veritas	Trunkline Length :	150
Project Name :	Moffett-Gateway, Former Vector Control Yard	Probe Type :	6520/Heater Block
Site Address :	750 Moffett Boulevard, Mountain View, CA	Rig Type :	Geoprobe 6600

Boring Information

Start Boring Time:	May 03 2013 08:02:55
End Boring Time :	May 03 2013 09:38:27
MIP Specialist :	Jeff Paul



13.0197

VIRONEX
1641 Challenge Drive
Concord, CA 94520
P: 925-849-6970
F: 925-849-6973
www.vironex.com

Boring Name : BV-M19

Total Depth : 50.80
GW Depth (ft) : 9.00
Depth of GW Provided by Client.
Blue line on each graph denotes depth of GW.

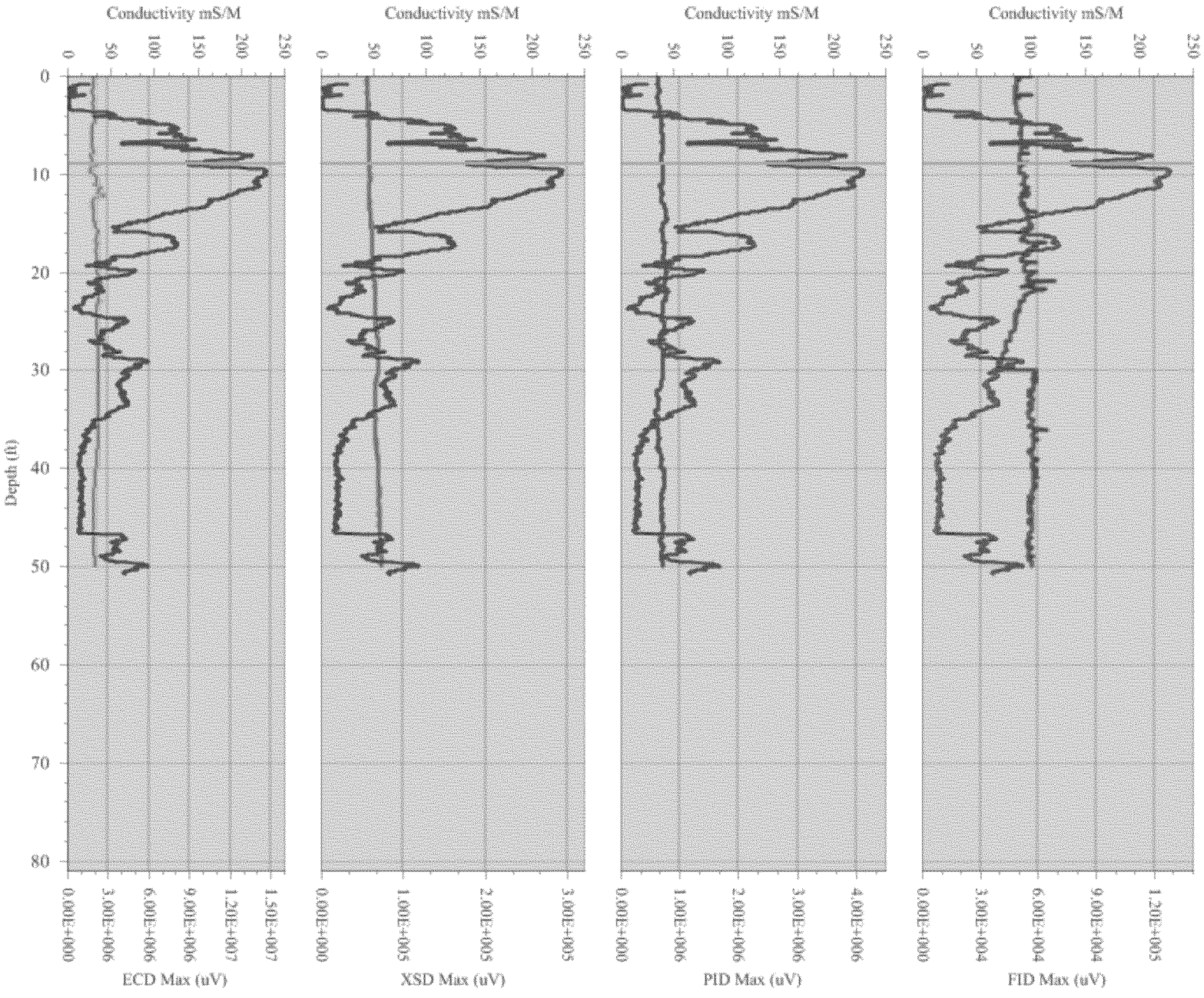
None.

Project Information

Client Company :	Bureau Veritas	Trunkline Length :	150
Project Name :	Moffett-Gateway, Former Vector Control Yard	Probe Type :	6520/Heater Block
Site Address :	750 Moffett Boulevard, Mountain View, CA	Rig Type :	Geoprobe 6600

Boring Information

Start Boring Time:	May 03 2013 13:49:56
End Boring Time :	May 03 2013 14:47:49
MIP Specialist :	Jeff Paul



VIRONEX
1641 Challenge Drive
Concord, CA 94520
P: 925-849-6970
F: 925-849-6973
www.vironex.com

Boring Name : BV-M20

Total Depth : 50.90
GW Depth (ft) : 9.00
Depth of GW Provided by Client.
Blue line on each graph denotes depth of GW.

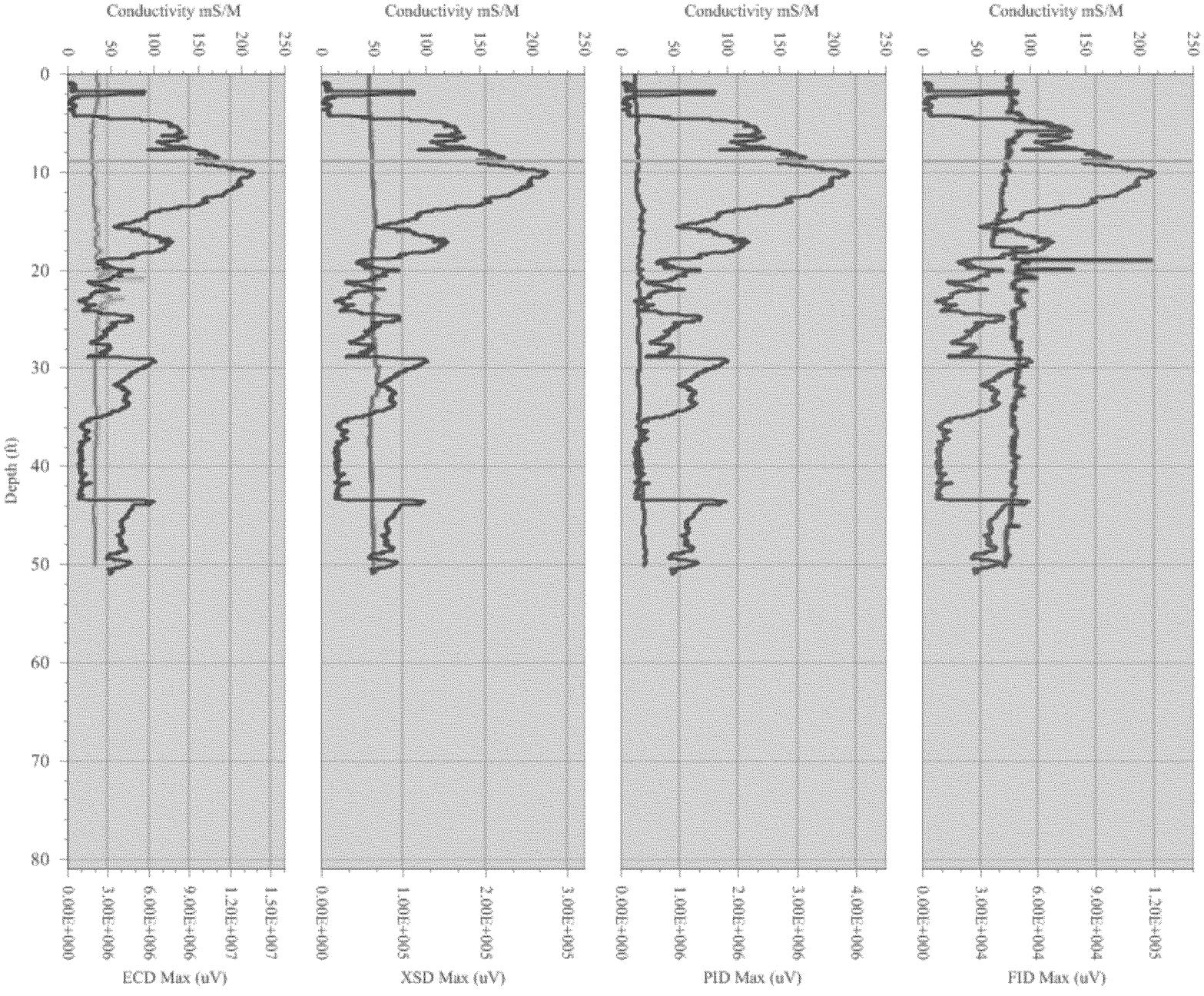
None.

Project Information

Client Company :	Bureau Veritas	Trunkline Length :	150
Project Name :	Moffett-Gateway, Former Vector Control Yard	Probe Type :	6520/Heater Block
Site Address :	750 Moffett Boulevard, Mountain View, CA	Rig Type :	Geoprobe 6600

Boring Information

Start Boring Time:	May 03 2013 11:09:07
End Boring Time :	May 03 2013 12:07:34
MIP Specialist :	Jeff Paul



VIRONEX
1641 Challenge Drive
Concord, CA 94520
P: 925-849-6970
F: 925-849-6973
www.vironex.com

Boring Name : BV-M21

Total Depth : 71.05
GW Depth (ft) : 9.00
Depth of GW Provided by Client.
Blue line on each graph denotes depth of GW.

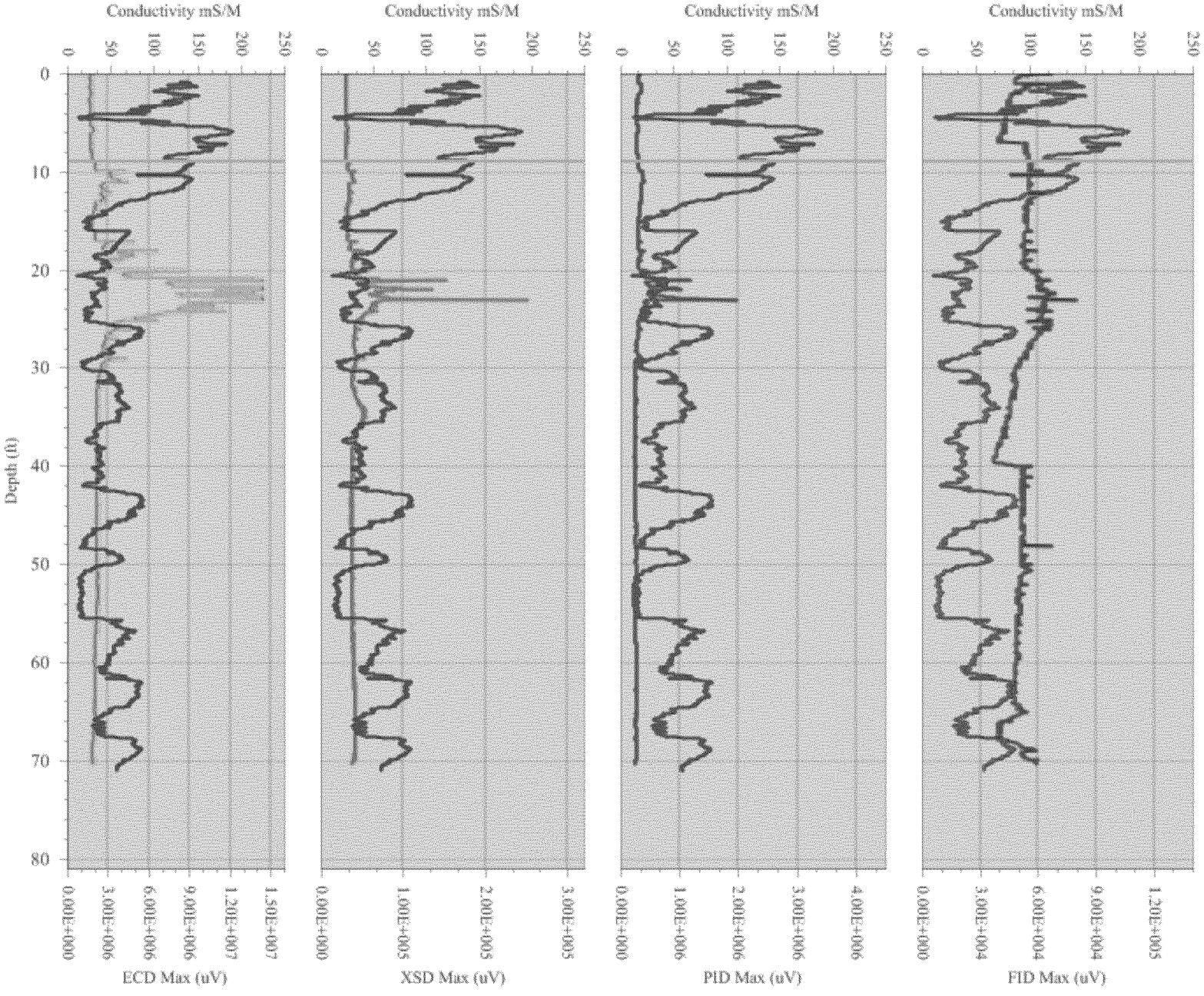
None.

Project Information

Client Company :	Bureau Veritas	Trunkline Length :	150
Project Name :	Moffett-Gateway, Former Vector Control Yard	Probe Type :	6520/Heater Block
Site Address :	750 Moffett Boulevard, Mountain View, CA	Rig Type :	Geoprobe 6600

Boring Information

Start Boring Time:	May 06 2013 07:55:53
End Boring Time :	May 06 2013 09:18:29
MIP Specialist :	Jeff Paul



VIRONEX
1641 Challenge Drive
Concord, CA 94520
P: 925-849-6970
F: 925-849-6973
www.vironex.com

Boring Name : BV-M22

Total Depth : 55.95
GW Depth (ft) : 9.00
Depth of GW Provided by Client.
Blue line on each graph denotes depth of GW.

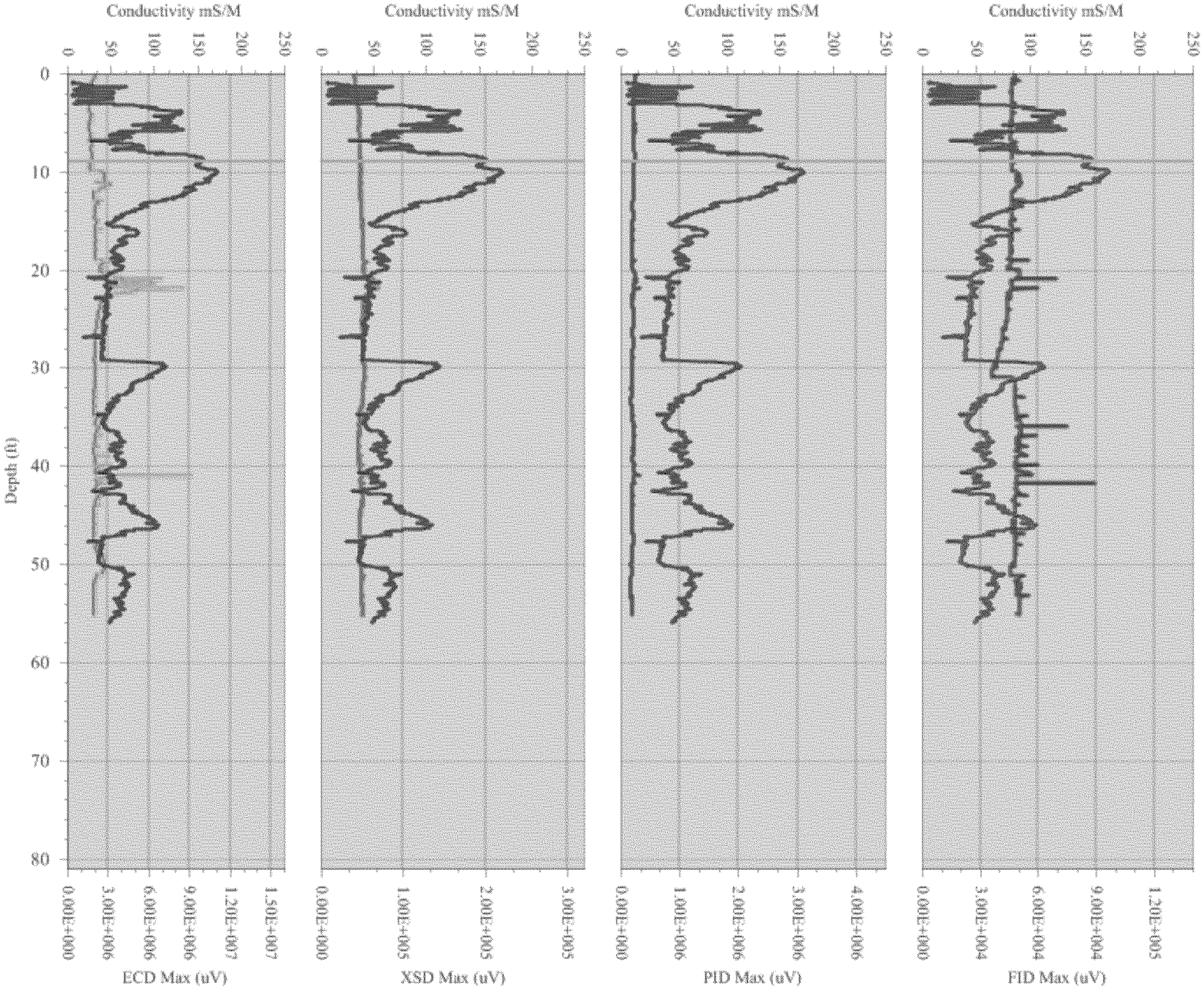
None.

Project Information

Client Company :	Bureau Veritas	Trunkline Length :	150
Project Name :	Moffett-Gateway, Former Vector Control Yard	Probe Type :	6520/Heater Block
Site Address :	750 Moffett Boulevard, Mountain View, CA	Rig Type :	Geoprobe 6600

Boring Information

Start Boring Time:	May 06 2013 13:01:07
End Boring Time :	May 06 2013 14:19:54
MIP Specialist :	Jeff Paul



VIRONEX
1641 Challenge Drive
Concord, CA 94520
P: 925-849-6970
F: 925-849-6973
www.vironex.com

Boring Name : BV-M23

Total Depth : 50.95
GW Depth (ft) : 9.00
Depth of GW Provided by Client.
Blue line on each graph denotes depth of GW.

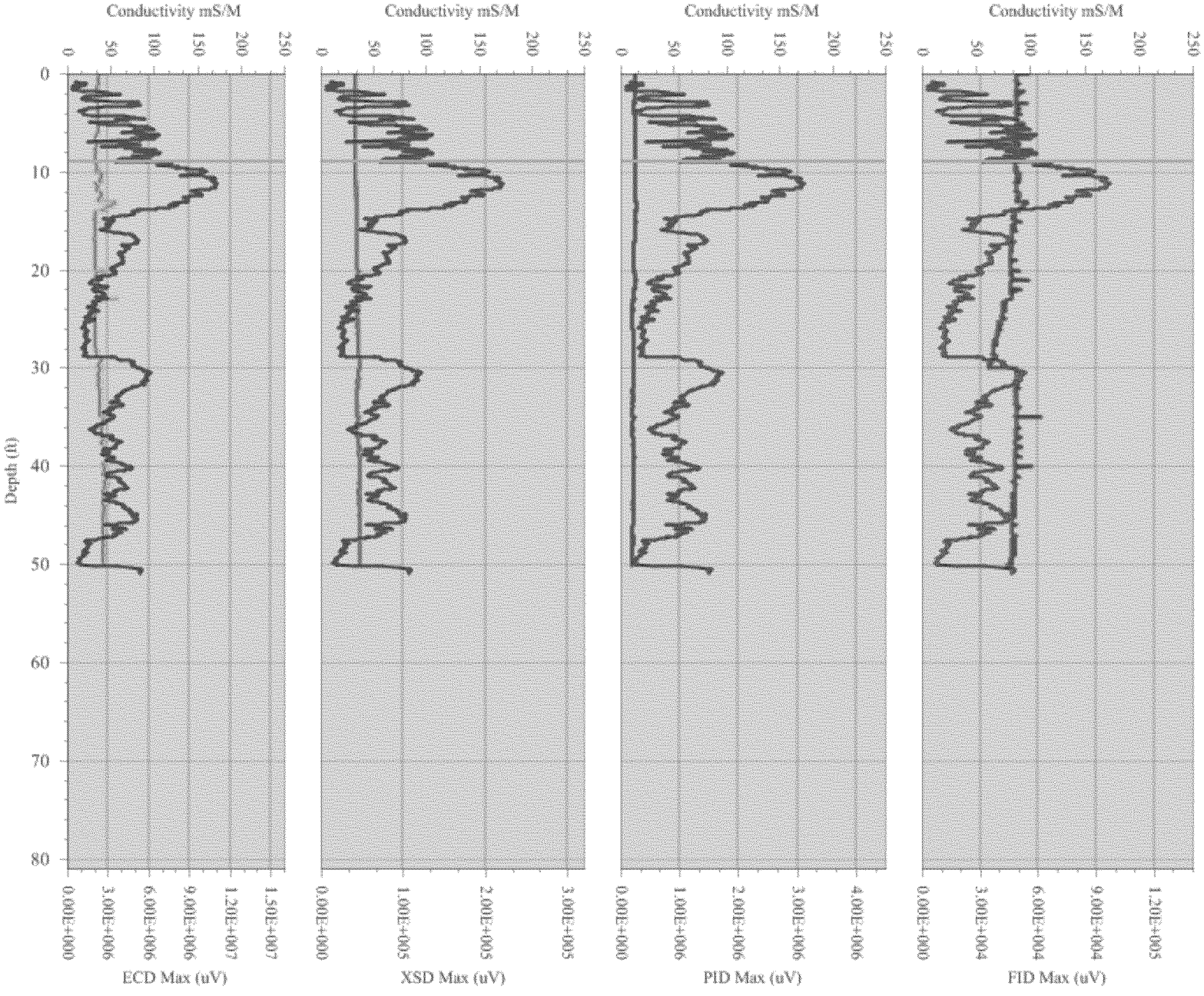
None.

Project Information

Client Company :	Bureau Veritas	Trunkline Length :	150
Project Name :	Moffett-Gateway, Former Vector Control Yard	Probe Type :	6520/Heater Block
Site Address :	750 Moffett Boulevard, Mountain View, CA	Rig Type :	Geoprobe 6600

Boring Information

Start Boring Time:	May 06 2013 10:24:10
End Boring Time :	May 06 2013 11:50:32
MIP Specialist :	Jeff Paul



VIRONEX
1641 Challenge Drive
Concord, CA 94520
P: 925-849-6970
F: 925-849-6973
www.vironex.com

Boring Name : BV-M24

Total Depth : 50.65
GW Depth (ft) : 9.00
Depth of GW Provided by Client.
Blue line on each graph denotes depth of GW.

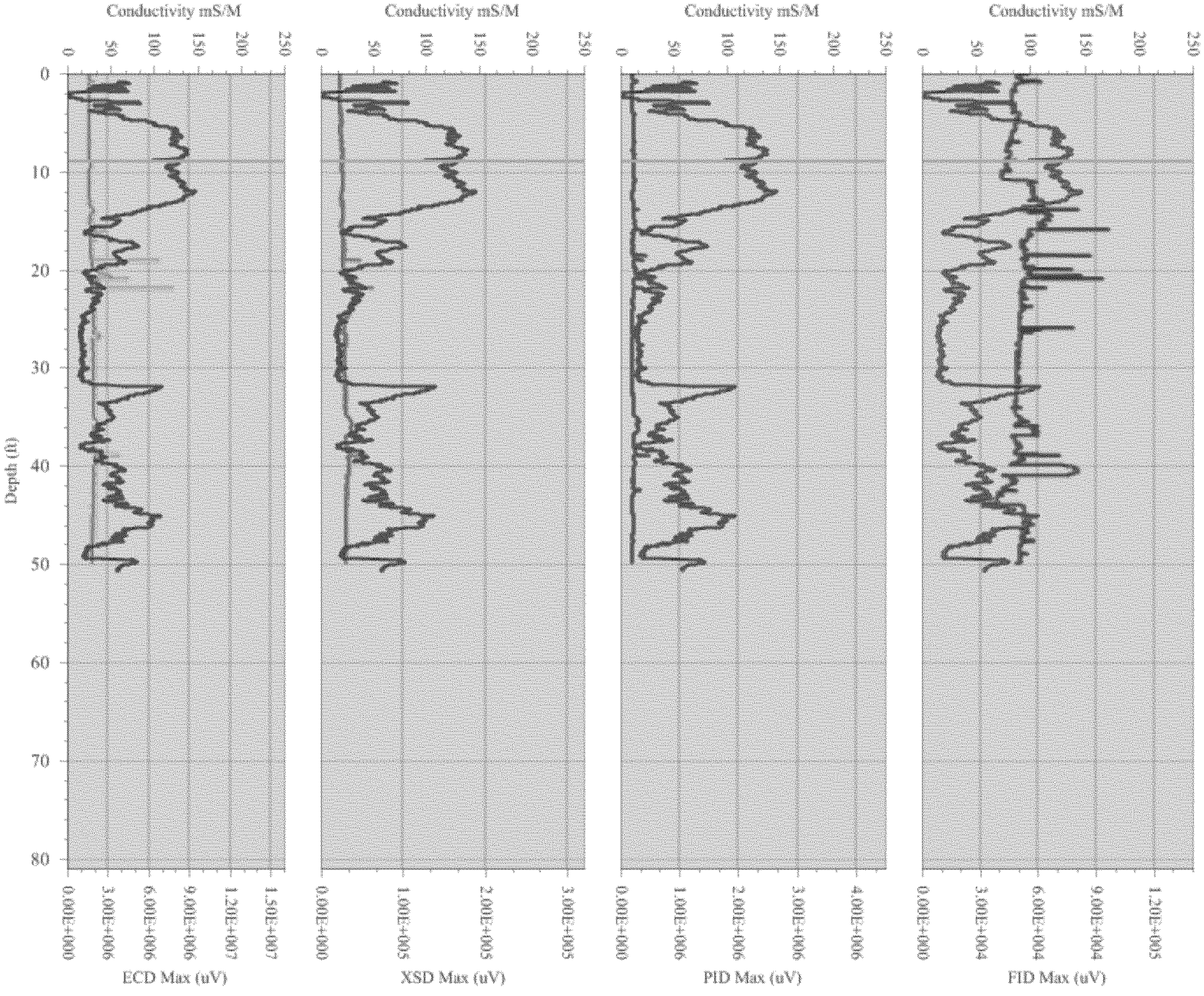
None.

Project Information

Client Company :	Bureau Veritas	Trunkline Length :	150
Project Name :	Moffett-Gateway, Former Vector Control Yard	Probe Type :	6520/Heater Block
Site Address :	750 Moffett Boulevard, Mountain View, CA	Rig Type :	Geoprobe 6600

Boring Information

Start Boring Time:	May 07 2013 08:33:14
End Boring Time :	May 07 2013 09:29:58
MIP Specialist :	Jeff Paul



1641 Challenge Drive
Concord, CA 94520
P: 925-849-6970
F: 925-849-6973
www.vironex.com

Boring Name : BV-M25

Total Depth : 50.65
GW Depth (ft) : 9.00
Depth of GW Provided by Client.
Blue line on each graph denotes depth of GW.

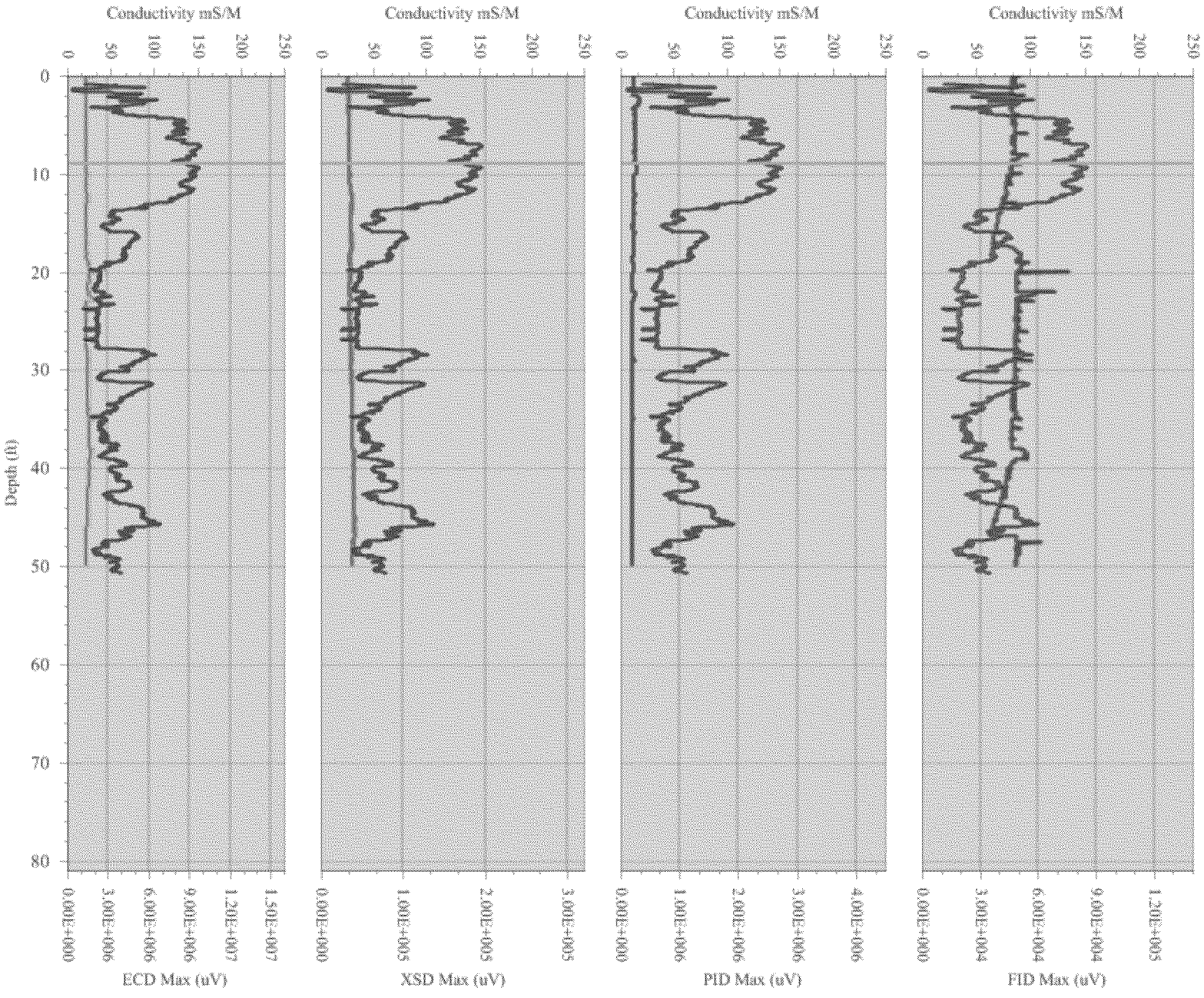
None.

Project Information

Client Company :	Bureau Veritas	Trunkline Length :	150
Project Name :	Moffett-Gateway, Former Vector Control Yard	Probe Type :	6520/Heater Block
Site Address :	750 Moffett Boulevard, Mountain View, CA	Rig Type :	Geoprobe 6600

Boring Information

Start Boring Time:	May 07 2013 10:10:18
End Boring Time :	May 07 2013 11:11:45
MIP Specialist :	Jeff Paul



VIRONEX
1641 Challenge Drive
Concord, CA 94520
P: 925-849-6970
F: 925-849-6973
www.vironex.com

Boring Name : BV-M26

Total Depth : 34.60
GW Depth (ft) : 9.00
Depth of GW Provided by Client.
Blue line on each graph denotes depth of GW.

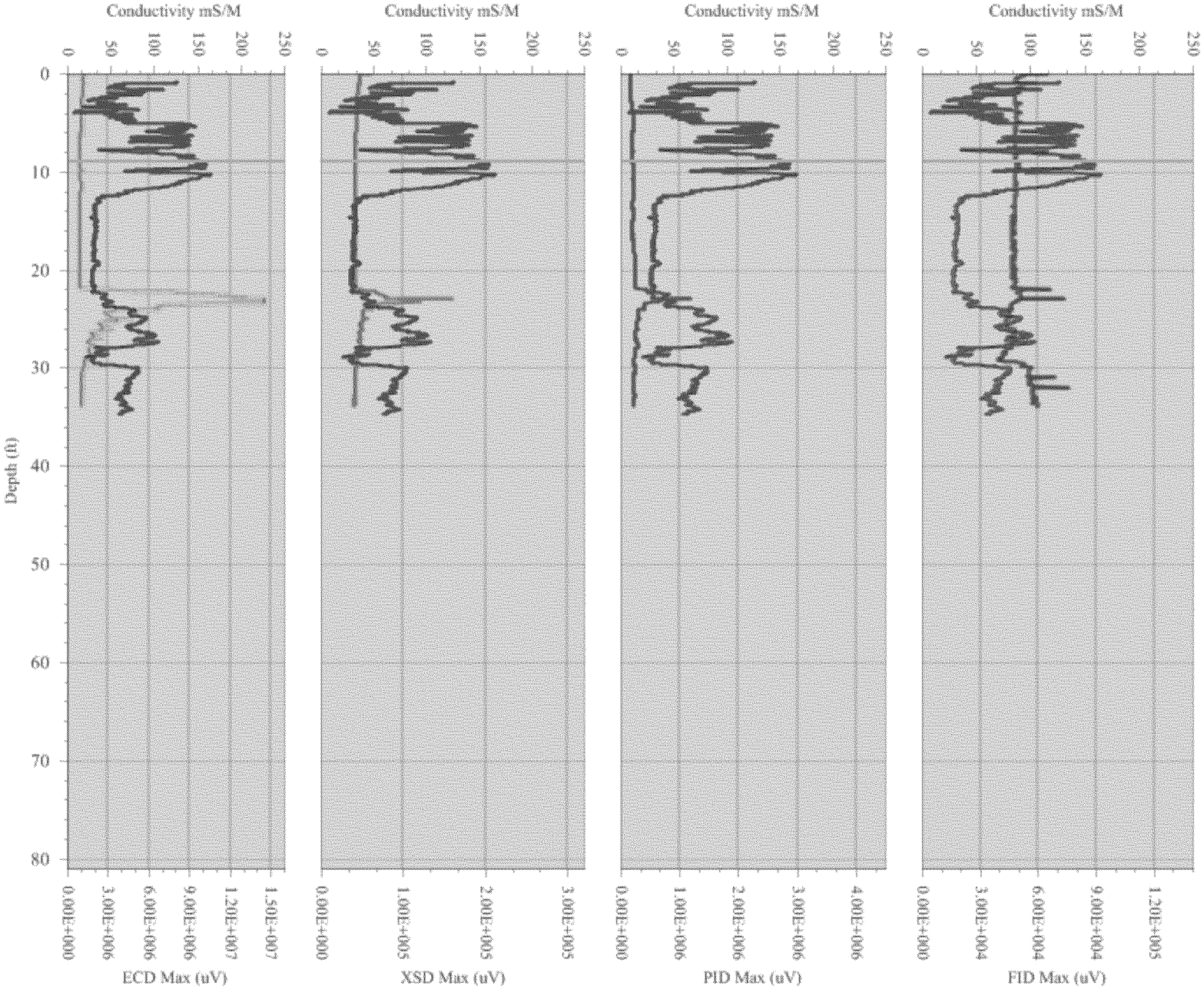
None.

Project Information

Client Company :	Bureau Veritas	Trunkline Length :	150
Project Name :	Moffett-Gateway, Former Vector Control Yard	Probe Type :	6520/Heater Block
Site Address :	750 Moffett Boulevard, Mountain View, CA	Rig Type :	Geoprobe 6600

Boring Information

Start Boring Time:	May 07 2013 12:19:25
End Boring Time :	May 07 2013 13:02:42
MIP Specialist :	Jeff Paul



13.0197

VIRONEX
1641 Challenge Drive
Concord, CA 94520
P: 925-849-6970
F: 925-849-6973
www.vironex.com

Boring Name : BV-M27

Total Depth : 34.65
GW Depth (ft) : 9.00
Depth of GW Provided by Client.
Blue line on each graph denotes depth of GW.

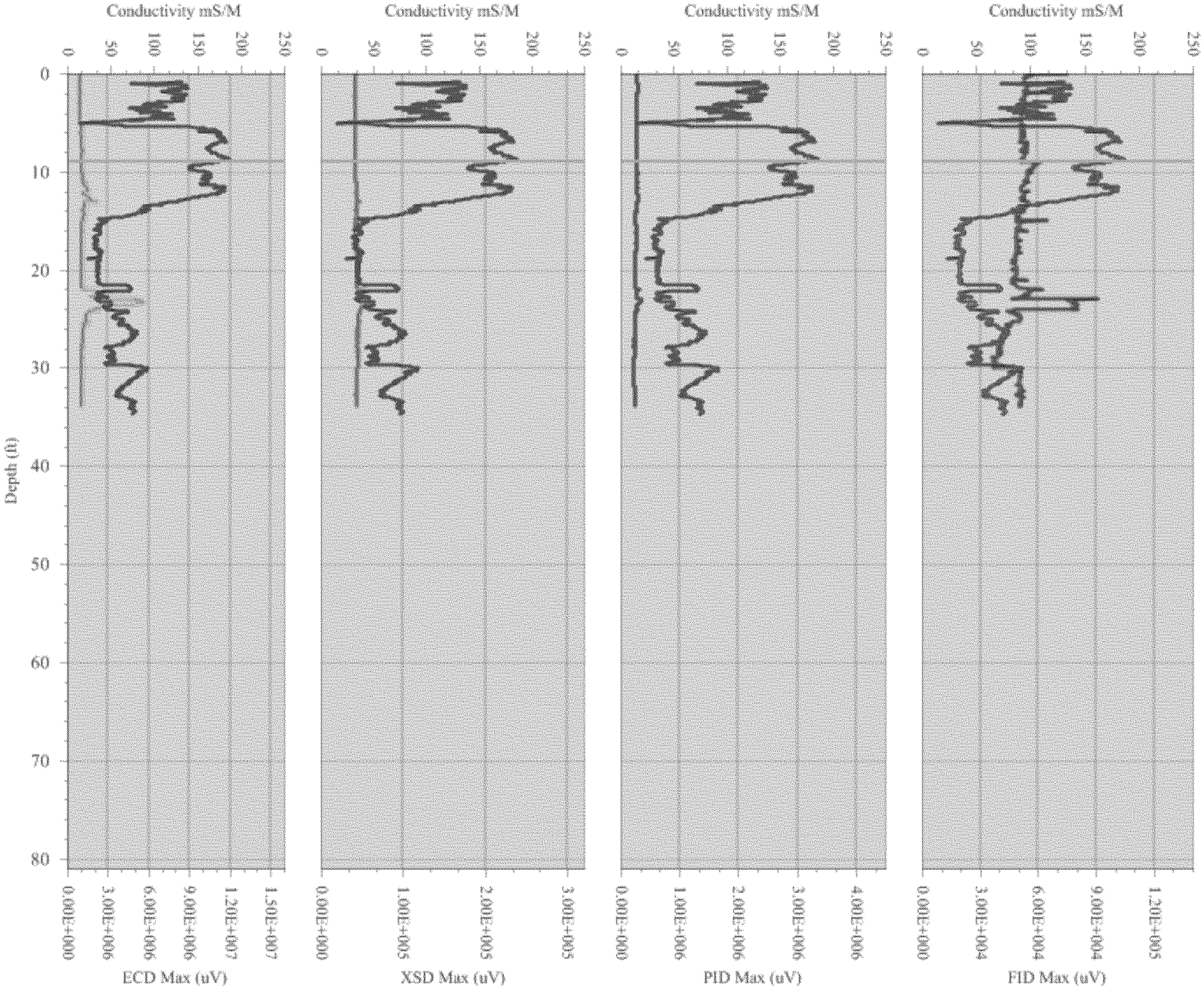
None.

Project Information

Client Company :	Bureau Veritas	Trunkline Length :	150
Project Name :	Moffett-Gateway, Former Vector Control Yard	Probe Type :	6520/Heater Block
Site Address :	750 Moffett Boulevard, Mountain View, CA	Rig Type :	Geoprobe 6600

Boring Information

Start Boring Time:	May 07 2013 13:28:34
End Boring Time :	May 07 2013 14:10:28
MIP Specialist :	Jeff Paul



APPENDIX D

SOIL BORING LOGS

LOG OF SOIL BORING

Project No.:	33112-012112.00
Project Name:	Moffett-Gateway
Location:	Mountain View, California
Logged By:	P. McLaughlin

BORING NO. **BV-C9**

Start Date: 7/1/2013	Start Time: 11:05	Elevation (ft, msl): N/A
Finish Date: 7/1/2013	Finish Time: 11:20	Boring Diameter (in) 2

Driller: Vironex	Drill Method: Direct Push
Hammer Weight: N/A	Drop: N/A

Borehole Completion Data: Backfilled with bentonite-cement

Depth To ▽ (ft)	N/A	Depth To ▼ (ft)	N/A
Time:		Time:	
Date:		Date:	

▽ Encountered Groundwater Depth
▼ Static Groundwater Depth
☒ Sample Collected
■ Sample Analyzed

SAMPLE INTERVAL	SAMPLE RECOVERY (in)	SAMPLE ID	PID READING (ppm)	TIME	DEPTH (ft)	SAMPLE	GRAPHIC LOG	USCS	DESCRIPTION
				1105				SP	GRAVELLY SAND grayish brown, dry, medium dense, fine to coarse sand, with fine gravel. up to 3/4" dia., angular
	60		0.1	1110	1 2 3 4 5			CL	SILTY CLAY damp, olive brown, stiff, some fine to coarse gravel, up to 1" dia., sub-angular, no odor becomes grayish brown
	18	6	0.0	1115	6	■		ML	SANDY SILT olive brown, damp, medium stiff, fine sand, no odor
	44	10	0.0	1120	7 8 9 10	■		CL	SILTY CLAY grayish brown, damp, very stiff, no odor
					11 12 13 14 15 16 17 18 19				Bottom of boring at 10.5 feet bgs.

LOG OF SOIL BORING

Project No.:	33112-012112.00
Project Name:	Moffett-Gateway
Location:	Mountain View, California
Logged By:	P. McLaughlin

BORING NO. **BV-SD1**

Start Date: 6/21/2013	Start Time: 08:50	Elevation (ft, msl): N/A
Finish Date: 6/21/2013	Finish Time: 10:00	Boring Diameter (in) 2

Driller: Vironex	Drill Method: Direct Push
Hammer Weight: N/A	Drop: N/A

Borehole Completion Data: Backfilled with bentonite-cement

▽ Encountered Groundwater Depth
▼ Static Groundwater Depth
☒ Sample Collected
▮ Sample Analyzed

Depth To ▽ (ft)	14.75	Depth To ▼ (ft)	N/A
Time:	09:15	Time:	
Date:	06/21/13	Date:	

SAMPLE INTERVAL	SAMPLE RECOVERY (in)	SAMPLE ID	PID READING (ppm)	TIME	DEPTH (ft)	USCS	DESCRIPTION
	42		0.0	0850 0900	1–4	ML	CLAYEY SILT dark brown, damp, soft, some fine to coarse sand, no odor
	46		0.0	0910	5–8		
	12		0.4	0915	8–14	CL	SILTY CLAY grayish brown, moist, soft, no odor ▽
	24		10.1 3.5	0925	15–18	CL	SANDY CLAY grayish brown, wet, soft, fine to coarse sand, no odor
					18–19	SP	GRAVELLY SAND grayish brown, wet, loose, medium to coarse sand, with fine to coarse gravel, up to 3/4" dia., sub-angular, no odor

LOG OF SOIL BORING

Project No.: 33112-012112.00
Project Name: Moffett-Gateway
Location: Mountain View, California
Logged By: P. McLaughlin

BORING NO.
BV-SD1

SAMPLE INTERVAL	SAMPLE RECOVERY (in)	SAMPLE ID	PID READING (ppm)	TIME			DEPTH (ft)	SAMPLE	GRAPHIC LOG	USCS	DESCRIPTION
			0.0				21–24			SP	GRAVELLY SAND grayish brown, wet, loose, medium to coarse sand, with fine to coarse gravel, up to 3/4" dia., sub-angular, no odor
	42		0.4	1000			24–25			CL	SILTY CLAY gray, moist, medium stiff, trace fine to medium sand, organic, peaty odor
							25–44				Bottom of boring at 25.0 feet bgs.

LOG OF SOIL BORING

Project No.:	33112-012112.00
Project Name:	Moffett-Gateway
Location:	Mountain View, California
Logged By:	P. McLaughlin

BORING NO. **BV-SD2**

Start Date: 6/21/2013	Start Time: 13:00	Elevation (ft, msl): N/A
Finish Date: 6/21/2013	Finish Time: 15:30	Boring Diameter (in) 2

Driller: Vironex	Drill Method: Direct Push
Hammer Weight: N/A	Drop: N/A

Borehole Completion Data: Backfilled with bentonite-cement

▽ Encountered Groundwater Depth
▼ Static Groundwater Depth
☒ Sample Collected
▮ Sample Analyzed

Depth To ▽ (ft)	18.5	Depth To ▼ (ft)	12.0
Time:	13:45	Time:	14:40
Date:	06/21/13	Date:	06/21/13

SAMPLE INTERVAL	SAMPLE RECOVERY (in)	SAMPLE ID	PID READING (ppm)	TIME	DEPTH (ft)	USCS	DESCRIPTION
				1300			CLAYEY SILT dark brown, damp, medium stiff, some fine to coarse sand and fine gravel, up to 1/2" dia., no odor
	29		3.1	1310	5		
	39		1.6	1320	10	ML	
							becomes olive brown
					12		▼ 12.0, 1440, 6/21/13
							becomes moist
	36		1.7	1330	15		
							clayey sand interbed at 16.5-17', olive brown
	26		1.4	1340	17		becomes gray with olive brown mottling
					18		▽ becomes wet some fine to coarse sand and fine gravel, up to 1/2" dia., no odor
	17		1.2	1345	19		CLAYEY SILT, gray with orange mottling

LOG OF SOIL BORING

Project No.: 33112-012112.00
Project Name: Moffett-Gateway
Location: Mountain View, California
Logged By: P. McLaughlin

BORING NO.
BV-SD2

SAMPLE INTERVAL	SAMPLE RECOVERY (in)	SAMPLE ID	PID READING (ppm)	TIME	DEPTH (ft)	USCS	DESCRIPTION
					21	ML	CLAYEY SILT gray with orange brown mottling, wet, soft, no odor
					22		
					23		
					24	SP	SAND olive brown to gray, wet, loose, fine to coarse sand, no odor
	32		2.8	1420	25		GRAVELLY SAND grayish brown, wet, loose, medium to coarse sand, with fine to coarse gravel, up to 1" dia., sub-angular to angular, no odor
					26		
					27	SP	
					28		
					29		
	34		2.3	1530	30		
					31		Bottom of boring at 30.0 feet bgs.
					32		
					33		
					34		
					35		
					36		
					37		
					38		
					39		
					40		
					41		
					42		
					43		
					44		

LOG OF SOIL BORING

BUREAU VERITAS

Project No.:	33112-012112.00
Project Name:	Moffett-Gateway
Location:	Mountain View, California
Logged By:	P. McLaughlin

BORING NO. **BV-SS1**

Start Date:	6/21/2013	Start Time: 10:45	Elevation (ft, msl): N/A
Finish Date:	6/21/2013	Finish Time: 11:00	Boring Diameter (in) 2

Driller:	Vironex	Drill Method:	Direct Push
Hammer Weight:	N/A	Drop:	N/A

Borehole Completion Data: Backfilled with bentonite-cement

Depth To ▽ (ft)	14.0	Depth To ▼ (ft)	N/A
Time:	11:00	Time:	
Date:	06/21/13	Date:	

▽ Encountered Groundwater Depth
▼ Static Groundwater Depth
☒ Sample Collected
▮ Sample Analyzed

SAMPLE INTERVAL	SAMPLE RECOVERY (in)	SAMPLE ID	PID READING (ppm)	TIME	DEPTH (ft)	USCS	DESCRIPTION
	42		0.4	1045 1050	1 2 3 4 5	ML	CLAYEY SILT dark brown, damp, some fine to coarse sand, no odor
	44		0.1	1055	6 7 8 9	CL	SILTY CLAY grayish brown with orangish-brown mottling, stiff, no odor
	20		0.0	1100	10 11 12 13 14 15	ML	CLAYEY SILT olive brown, damp, soft, no odor thin fine to medium sand interbed at 9.5' and 14' (2"-3" thick) ▽ becomes wet
					16 17 18 19		Bottom of boring at 15.0 feet bgs.

BUREAU VERITAS

LOG OF SOIL BORING

Project No.:	33112-012112.00
Project Name:	Moffett-Gateway
Location:	Mountain View, California
Logged By:	P. McLaughlin

BORING NO. **BV-SS2**

Start Date: 7/2/2013	Start Time: 08:53	Elevation (ft, msl): N/A
Finish Date: 7/2/2013	Finish Time: 09:05	Boring Diameter (in) 2

Driller: Vironex	Drill Method: Direct Push
Hammer Weight: N/A	Drop: N/A

Borehole Completion Data: Backfilled with bentonite-cement

▽ Encountered Groundwater Depth
▼ Static Groundwater Depth
☒ Sample Collected
▮ Sample Analyzed

Depth To ▽ (ft)	13.5	Depth To ▼ (ft)	13.1
Time:	09:05	Time:	07:22
Date:	07/02/13	Date:	07/03/13

SAMPLE INTERVAL	SAMPLE RECOVERY (in)	SAMPLE ID	PID READING (ppm)	TIME	DEPTH (ft)	USCS	DESCRIPTION
	40		0.0	0853 0858	1–5		CLAYEY SILT dark brown, dry, medium stiff, some fine to coarse sand and fine gravel, up to 1/2" dia., no odor
	39		1.8	0900	6–10	ML	gravelly sand interval from 9.25'-9.75'. fine to coarse sand and fine gravel, up to 1/2" dia., light orangish-brown
	29		2.4	0905	11–13		▼ 13.1', 0722, 7/3/13 ▽
					14	ML	SANDY SILT, greenish gray, wet, fine sand, no odor
					14	ML	CLAYEY SILT, dark brown, moist, medium stiff, no odor
					15	ML	SANDY SILT, greenish gray, wet, fine sand, no odor
					16–19		Bottom of boring at 15.0 feet bgs.

APPENDIX E

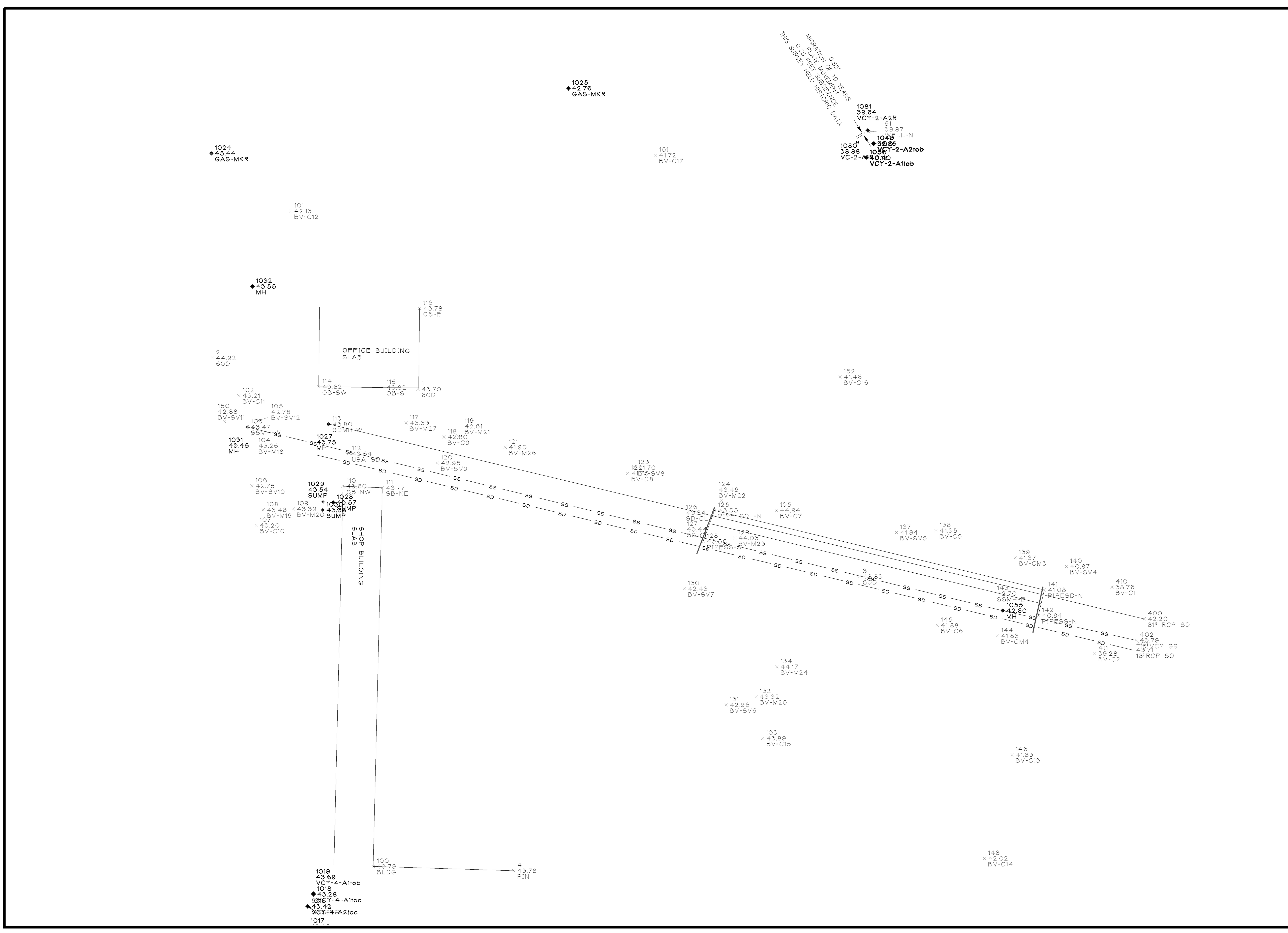
SURVEY DATA

Survey Data
Moffett Gateway Property
750 Moffett Boulevard, Mountain View, California
May 2013

PTNO	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	1974226.99	6106108.04	43.70	60D
2	1974242.22	6106007.97	44.92	60D
3	1974135.74	6106323.03	48.83	60D
4	1973992.48	6106154.73	43.78	PIN
50	1973975.13	6106054.50	43.43	CASING-S
51	1974352.31	6106327.73	39.87	WELL-N
52	1974656.21	6106121.10	37.76	WELL-N
100	1973994.59	6106086.32	43.79	BLDG
101	1974313.75	6106046.04	42.13	BV-C12
102	1974223.85	6106020.86	43.21	BV-C11
103	1974208.62	6106024.92	43.47	SSMH-W
104	1974205.18	6106027.60	43.26	BV-M18
105	1974211.71	6106030.34	42.78	BV-SV12
106	1974179.89	6106027.13	42.75	BV-SV10
107	1974160.66	6106029.24	43.20	BV-C10
108	1974168.24	6106032.67	43.48	BV-M19
109	1974168.68	6106047.36	43.39	BV-M20
110	1974179.74	6106071.52	43.60	SB-NW
111	1974178.97	6106090.71	43.77	SB-NE
112	1974195.57	6106074.17	43.64	USA SD
113	1974209.99	6106064.63	43.80	SDMH-W
114	1974228.17	6106059.71	43.62	OB-SW
115	1974227.82	6106091.03	43.82	OB-S
116	1974266.32	6106108.87	43.78	OB-E
117	1974210.60	6106102.29	43.33	BV-M27
118	1974203.73	6106120.72	42.80	BV-C9
119	1974204.25	6106127.41	42.61	BV-M21
120	1974191.05	6106117.50	42.95	BV-SV9
121	1974198.73	6106150.56	41.90	BV-M26
122	1974186.03	6106210.25	41.75	BV-C8
123	1974188.78	6106213.52	41.70	BV-SV8
124	1974172.71	6106255.89	43.49	BV-M22
125	1974168.00	6106252.55	43.55	PIPE SD -N
126	1974165.09	6106251.67	43.24	SD-CL
127	1974154.39	6106247.78	43.44	SS-CL
128	1974152.87	6106247.06	43.56	PIPESS-S
129	1974154.53	6106262.33	44.03	BV-M23
130	1974129.84	6106237.78	42.43	BV-SV7
131	1974073.30	6106258.19	42.96	BV-SV6
132	1974077.27	6106272.81	43.32	BV-M25
133	1974057.02	6106276.04	43.89	BV-C15
134	1974091.83	6106282.95	44.17	BV-M24
135	1974168.02	6106282.75	44.94	BV-C7
136	1974598.89	6106222.85	38.15	BVSV2
137	1974157.21	6106341.19	41.94	BV-SV5
138	1974158.11	6106360.45	41.35	BV-C5
139	1974144.91	6106399.01	41.37	BV-CM3
140	1974140.68	6106423.97	40.97	BV-SV4
141	1974129.25	6106413.19	41.08	PIPESD-N
142	1974116.75	6106410.28	40.94	PIPESS-N

Survey Data
Moffett Gateway Property
750 Moffett Boulevard, Mountain View, California
May 2013

PTNO	NORTHING	EASTING	ELEVATION	DESCRIPTION
143	1974119.18	6106392.95	42.70	SSMH-E
144	1974106.88	6106390.37	41.83	BV-CM4
145	1974112.02	6106361.03	41.88	BV-C6
146	1974048.97	6106397.48	41.83	BV-C13
147	1973998.47	6106384.04	41.10	BV-C14
148	1973998.47	6106384.04	42.02	BV-C14
149	1974501.05	6106125.13	39.12	BV-SV3
150	1974211.21	6106013.96	42.88	BV-SV11
151	1974340.93	6106223.77	41.72	BV-C17
152	1974233.00	6106313.69	41.46	BV-C16
400	1974115.13	6106461.81	42.20	81" RCP SD
401	1974100.01	6106456.16	43.71	18"RCP SD
402	1974104.69	6106457.92	43.79	15"VCP SS
410	1974130.62	6106446.11	38.76	BV-C1
411	1974098.28	6106437.77	39.28	BV-C2
1003	1973762.36	6106246.62	44.77	VCY-3-A1toc
1004	1973762.60	6106246.51	45.46	VCY-3-A1tob
1005	1973769.13	6106236.71	44.58	VCY-3-A2toc
1006	1973769.35	6106236.61	45.23	VCY-3-A2tob
1016	1973975.12	6106054.42	43.42	VCY-4-A2toc
1017	1973975.29	6106054.39	43.95	VCY-4-A2tob
1018	1973981.00	6106057.24	43.28	VCY-4-A1toc
1019	1973981.33	6106057.20	43.69	VCY-4-A1tob
1024	1974341.88	6106007.41	45.44	GAS-MKR
1025	1974373.55	6106181.39	42.76	GAS-MKR
1027	1974210.03	6106064.62	43.75	MH
1028	1974171.83	6106066.83	43.57	SUMP
1029	1974172.05	6106061.89	43.54	SUMP
1030	1974168.14	6106061.75	43.38	SUMP
1031	1974208.57	6106024.90	43.45	MH
1032	1974277.05	6106027.46	43.55	MH
1036	1974472.70	6105988.65	41.79	MH
1038	1974649.83	6106117.87	37.57	VCY-1-A1toc
1039	1974650.05	6106118.03	38.06	VCY-1-A1tob
1040	1974656.21	6106121.19	37.77	VCY-1-A2toc
1041	1974656.37	6106121.36	38.03	VCY-1-A2tob
1048	1974346.59	6106330.03	39.85	VCY-2-A2toc
1049	1974346.64	6106330.25	40.31	VCY-2-A2tob
1050	1974339.60	6106326.33	40.18	VCY-2-A1toc
1051	1974339.75	6106326.51	40.40	VCY-2-A1tob
1055	1974119.11	6106393.02	42.60	MH
1073	1973114.36	6105935.95	50.91	BM144
1080	1974347.32	6106322.19	38.88	VC-2-A1R
1081	1974353.03	6106327.27	39.64	VCY-2-A2R



ACCURATE LAND SOLUTIONS
1271 WASHINGTON AVE, #533, SAN LEANDRO, CA 94577
(510) 553-9700 FAX 1-866-231-6537

CLIENT
ADDRESS
THIRD
FORTH

TOPOGRAPHIC SURVEY
SECOND
THRID
FOURTH

FILENAME:	TOPO
CHECKED BY:	CHK
DRAWN BY:	RAK
SCALE:	1" = 20'
DATE	00/00/2008
PROJECT NO.	2008.000
SHEET NO.	1 of 1

APPENDIX F

LABORATORY ANALYTICAL REPORTS
(Provided as a separate file)